THE
Genesee Farmer.
THE PRACTICAL AND SCIENTIFIC FARMERS OWN PAPER.

VOL. XXIII, SECOND SERIES. ROCHESTER, N. Y, MARCH, 1862. No 3.

CULTIVATION OF THE BEET FOR SUGAR.

IN 1747, a Prussian chemist, M. MARGRAAF, in analyzing the Silesian beet root, discovered that it contained sugar. The discovery, however, led to no practical result till near the close of the century. France was then deprived of her sugar colonies. Domingo, which had supplied her with 150,000,000 lbs. per annum, became free and no longer produced sugar for export. The price of sugar in France rose to five francs per kilogramme (fifty cents per lb.). The French government offered rewards for the best method of producing sugar from indigenous plants. The discovery of MARGRAAF was soon turned to beneficial account. The beets at first afforded three per cent. of sugar. By improved methods of manufacture, the yield was increased to four, five, six, and finally to seven per cent. The cultivation of the beet for sugar soon became quite extensive. The manufacturers enjoyed a monopoly of the market, and correspondingly high prices. Secure in this monopoly, the manufacturers neglected the best methods of purifying the juice. The sugar was of a very inferior quality. The peace of 1815 deprived them of the monopoly and high prices they had so long enjoyed, and the cultivation of the beet for sugar was greatly retarded, notwithstanding the high duties imposed on colonial sugars. In 1828 the quantity prodnced was only 4800 tons.

Since that time, the manufacture has not only recovered itself, but has become firmly established among the industrial pursuits of the country. M. DE LAVERGNE, in his recent able work on French Agriculture, states that there are now 350 sugar works in France, 150 of which are in the Department of the Nord (North), to supply which 20,000 hectares (49,350 acres) are under beet-root; producing an average of 16 tons per acre, and yielding about 576,016 tons of sugar.

In 1852, the protective duties were removed, and such had been the great improvement that had been introduced, that the manufacturers were enabled to stand the competition of the colonial growers.

By actual trial, it has been found that 120,000 lbs. of beet-root will yield 8,400 lbs. of sugar, or seven per cent., and 5,030 lbs. of molasses. It is estimated that sugar can be produced at four cents per lb.

As we have said, great improvements in the manufacture have taken place. One result of the application of science and capital has been to increase the size of the sugar houses, while it has reduced the number. The small manufactories, with their imperfect processes, can not compete with the large establishments, where everything is done in a scientific and systematic manner.

We see no reason why beet sugar should not be extensively manufactured in this country. The climate is well adapted to the growth of beets, and the present and presumptive high price of sugar would insure large profits. The cane contains twice as much sugar as the beet, but not more than seven per cent. is usually obtained from it in practice. This is no more than can be obtained from the beet-root.

Sixteen tons of beet roots can easily be raised per acre. This would yield, at seven per cent., 2,240 lbs. of sugar, besides molasses. There is, too, another important item of profit—the leaves of the beets and the pulp. Both can be used as food for cattle; and it must be borne in mind that, as nothing is removed but sugar, *all* the manurial elements of the crop are left on the farm. The cultivation of the beet root, therefore, is one of the very best methods of increasing the fertility of the farm. On this point, LAVERGNE remarks:

"It was feared, in the first instance, that the cultivation of the sugar beet would lessen the production of cattle and wheat by occupying the best land. But this fear was ill-founded, at least relative to the best cultivated regions. It is now demonstrated that the manufacture of sugar, by creating a new source of profit, contributes to increase

the other products of the soil. The extraction of the saccharine matter deprives the root of only a part of its elements. Its pulp and foliage supply the animals with an abundance of food; and the returns of the sugar works enable them to add commercial manures, which indefinitely increase the fertility of the soil. In 1855, the city of Valenciennes, the principal seat of the manufacture, was able to inscribe upon a triumphal arch these significant words: 'Produce of wheat in the arondissement before the manufacture of sugar, 353,000 hectolitres (961,173 bushels); number of oxen, 700. Produce of wheat since the manufacture of sugar, 421,000 hectolitres (1,158,256 bushels); number of cattle, 11,500.'"

The pulp or solid residue amounts to about twenty per cent. of the entire root. When divested of the juice, it still contains two or three per cent of saccharine matter, and is greedily eaten by cattle and pigs, which fatten rapidly upon it. It is said not to be good, however, for milch cows.

Ordinary beets and mangel-wurzel contain sugar, but the Silesian beets alone are cultivated for this purpose. By judicious selection and culture varities have been obtained which contain much more sugar than the ordinary variety. In obtaining this result, however, the size of the root has been reduced. M. KNAUER, of Germany, has produced a variety, which he names the Imperial beet-root, whish contains 17¼ per cent. of sugar! This improvement places the beet on a par with the cane as a sugar plant, while the cultivator of the beet has several important advantages over the West India and Louisiana planters. The cultivation of the sugar cane occupies from twelve to fifteen months, and it must all be manufactured in a few days, or great loss ensues. On the other hand, the beet requires only about four months to arrive at maturity, and then it can be stored and manipulated at leisure.

COFFEE IN ILLINOIS.—It is said that G. R. HOFFMAN, of Effingham Co., Illinois, raised last year two bushels of coffee. The seed was sent him from Australia. The first year the plants were unproductive; the second year they bore a little, and produced a full crop the third year. He thinks thirty bushels can be grown per acre.

WHERE ENGLAND GETS HER TIMBER.—Great Britain and Ireland import annually some 27,000,000 cubic feet, or 540,000 loads of Canadian pine timber, the greater part of which is manufactured on the Ottawa river and its tributaries. The operations of this manufacture extend over upward of 11,000 square miles, and give employment to more than 40,000 men.

RATS—HOW TO DESTROY THEM.

SOLON ROBINSON, of the *New York Tribune*, well remarks that this species of the genus *Mus* is an almost intolerable nuisance in some portions of the United States. They follow man into the wilderness. When he located on the prairie in 1834, about fifteen miles from neighbors, and forty miles from what has since grown to be the city of Chicago, there was not a rat to be seen or heard of. For several years he was exempt from the pest. Then came abundance of shipping to Chicago, and with it abundance of rats, and they soon spread over the whole land, multiplying and devastating. Now they are great pests in the barns and stacks of prairie farmers.

Our common breed is called "Norway rats" from the supposition that they originated in that country. British naturalists, however, assert that they were introduced into the British Islands from India. If they are tropical animals, all we have to say is that they easily adapt themselves to a rigorous climate, where they multiply at a most prolific rate. What we are yet to do with them is a problem not easily solved. All the receipts to cure the nuisance are only preventive, not eradicative. A correspondent of the *Gardener's Monthly* says:

"I tried the effect of introducing into the entrance of their numerous holes, runs, or hiding-places, small portions of chloride of lime or bleaching powder, wrapped in calico and stuffed into the entrance holes, and thrown loose by spoonfuls into the drain from the house. This drove the rats away for a twelve-month, when they returned to it. They were treated in the same manner, with like effect. The cure was most complete. I presume it was the chlorine gas, which did not agree with their olfactories."

Arsenic is considered by some who have tried it, as a failure, used for the purpose of clearing premises of rats; because they are too cunning to partake of it after witnessing the death of two or three of the family. It is effectual, if the vermin will take the bait.

Strychnine we consider far preferable, and although so much more costly, it requires but a few cents' worth to do the work of death upon a hundred rats. It is also the very best thing to use upon a troublesome dog or cat that comes prowling about your premises. One grain for a dose is sufficient. Mr. ROBINSON has killed numerous wolves by inserting one grain of strychnine in the center of a piece of fresh meat, just large enough for a mouthful for a wolf. As rats do not bolt their food, it is a little more difficult to get them to take strychnine; it is so intensely bitter. If it is mixed

with cornmeal, and a few drops of oil of anise is added, it will attract the rats.

Tarring and feathering rats, and then letting them run, has been practised to give the tribe a hint that it would be well for them to leave. One rather smart individual, not having tar, used spirits of turpentine. He was going to drive the rats out of his house cellar. He was entirely successful; for when he let the rat loose in his kitchen, with a "shoo" to it to go down to the cellar stairs, it took the kitchen fire in its course, and then a pile of flax that lay in the cellar way. In two hours there was not a rat in the house, unless it might be a roasted one.

Plaster of Paris has proved a successful poison for rats; and it has the advantage of being quite harmless to have about the house. A tablespoonful of the flour of plaster, mixed in a cup of Indian meal, and slightly sweetened, will be eaten by rats, and kill them. A little grated cheese makes the food more attractive. Oil of anise would be still more so. In fact, by the use of it, rats may be coaxed out of a house to eat poison and die where their dead bodies would not be a nuisance.

Phosphorus, powdered and mixed with meal, a few grains to a teacupful, has been often used successfully as a rat poison.

Powdered potash, strewn in the paths frequented by rats, has been known to drive them away from a house. The theory is that it gives them very sore feet, and disgusts them with the place.

In England, rat-catching is a profession—sons often follow it as the business of their fathers. The rat-catcher visits a farmer, and contracts with him at so much a head for all the rats he destroys. His trap is a large bag, which is set with the mouth open, baited with a piece of bread scented with oil of anise and oil of rhodium, the scent of which attracts the rats, and thus he bags enough to fill the contract. He does not desire to rid the premises, as that would "spoil business." A rat-destroyer would not be tolerated by the honorable company of rat-catchers.

Among the many devices for trapping rats, we will mention a few of the best. A large wire-cage trap, where the second rat will go in because he sees the first in there, often proves successful in ridding a place of the pests. A large brass kettle, half full of water, with a small stone island in the center, just big enough for one rat to rest upon, the top of the kettle being covered with parchment similar to that of a drum-head, having a cross cut in the center, is a first-rate trap. Fasten a small bait upon the point of the cut, and the rat jumps down from a board arranged for the purpose, and through he goes into the water. He scrambles on the island and squeals for help. Another hears him, and comes looking around, sees the bait, jumps for it, takes the plunge, and goes down upon the other fellow's head. Then comes a scramble for place, the stronger pushing the weaker off to take his chance in the water. This muss, as with men, attracts others, and in they go. He has heard of twenty in a night thus inveigled to destruction.

A barrel, one-third full of water, with an island, the surface covered with chaff, and a bait suspended over it, he has been told, is an excellent trap.

Ferrets and weasels have been highly recommended to be kept about the barn to drive away rats. The objection to them is that they drive away the poultry also. Ferrets have been trained so as to be obedient to the call of their master, and used not only to hunt rats, but to drive rabbits out of their burrows.

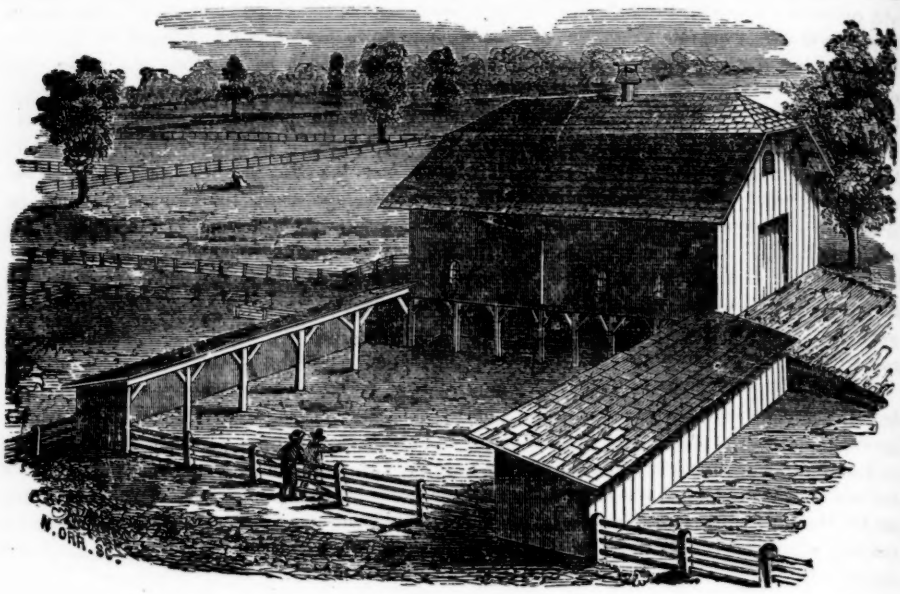
Perhaps the best thing for a farmer to do who is troubled with rats, is to multiply his stock of cats. He knew one farmer who kept fourteen cats, keeping up that number for more than a year, by which means he got rid of all annoyance from rats, and they also hunted the rabbits out of an adjoining grove.

Digging Potatoes—Again.—G. R. Underhill writes the *Country Gentleman*, in reference to the article in the *Genesee Farmer* in regard to digging potatoes early, that he has found from experiments that no *amount* or *kind* of manure would cause the potato to become diseased, and that the sure preventive is to plant as soon as possible in the spring, with the early ripening kinds, and dig them as soon as they are ripe. If every farmer would adopt that plan, he is satisfied that we should soon hear no more of the *potato rot*.

Good Cows.—C. A. Holmes, of Tompkins Co., N. Y., informs us that he sold last year, from three cows, between the 20th of March, and the 20th of December, or nine months, 750 lbs. of butter, besides supplying his family of three persons with what they wanted for use.

Jacob Way, of Peacham, Vt., is reported as having raised 110¼ bushels of wheat, by measurement, on 2½ acres of land.

A chestnut gelding, called Garibaldi, in a late hunt in Yorkshire, Eng., jumped 31 feet clear, over high posts and rails.



SIDE-HILL BARN WITH SHEDS.

SPIRIT OF THE AGRICULTURAL PRESS.

Fat Cow.—H. G. White, of Framingham, sends the Boston *Cultivator* the weight of a five-year old Short-horn cow, Pocahontas 5th, lately slaughtered by Paoli Latthrop, of South Hadley, Mass., as follows: Live weight, 1730 lbs. Dead weight: four quarters, 1,118 lbs.; tallow, 127 lbs.; hide, 90 lbs.; total, 1,135 lbs. It is stated that all the grain she ever consumed was less than 15 bushels.

Barn-Yards and Manure.—The *Country Gentleman* gives the following hints out this subject:

1. The barn-yard should be as small an enclosure as the amount of stock it is to accommodate will allow. It should be as dry as any place out of doors well can be—neither overflowed from higher ground, nor receiving the rain and melted snow from the surrounding barns and out-houses. It should be sheltered from the wind and open to the sun, that it may be a place of comfort to its occupants. It should contain a convenient supply of pure water for the stock, to save labor and exposure, and the waste of manure always occurring when the stock must seek water outside the barn-yard. If small, dry and sheltered, it will be easily kept littered, and thus better fit it for wintering stock and making and saving manure.

2. The greatest sources of loss of manure are from washing and over-fermentation or burning. In winter, yard manure suffers but slightly from the latter cause, and from the first there is little loss in a well arranged yard. But some fermentation is required to fit manure for use, and this end may be furthered by a little care in mixing and arranging the different materials for the compost heap. The stable manure should be spread around the yard, and particular care should be taken to mix that from the horse-stalls with that of the cattle, that the tendency to rapid decomposition of the first, may help the colder nature of the latter. In this way, too, the litter used is brought into a better state for absorbing the liquid parts, and the whole supply of manure is rendered more equable and of higher value. In no case should we neglect to provide some absorbent for the liquid manure, as it is of equal value with the solid excrement.

3. The sheep sheds should be well littered for the comfort of the animals, as well as to make more manure, but we have found no better method of saving the same from heating on the approach of warm weather, and consequent loss, than to remove the roof of boards (covering our sheds,) and exposing the contents to the weather. If drawn out and piled in heaps, it should be mixed with muck or strawy yard manure, and well moistened, or waste will occur from heating. Where open to the rain, it will usually decompose slowly, and be in a state for use on fall wheat or for top-dressing grass lands in autumn.

The Prolificness of Sows.—A correspondent of the Germantown *Telegraph* writes: "On the 25th of December, 1860, I had a Berkshire sow nine months old to give birth, and raise to four weeks old, nine pigs, which I sold at $2 apiece, making $18. She had the company of the male in a few days after the removal of the pigs, and on the 20th of May, 1861, she came with fourteen pigs, raising all but one to four weeks, which I sold at $1.75 each, making $22.75. After the removal of this litter, she had the company of the male again, and on the 24th of October, 1861, just ten months from the time of the first litter, she came with ten fine pigs more, bringing them safely along to four weeks old, when I sold them for $1.30 each, making $13—pigs being unusally plenty last fall, and consequently low—making an aggregate of thirty-two pigs from one sow, within a period of ten months, and bringing me in round cash $53.75.

After the lacteals were dry, the mother was ready for the meat tub. I had a Suffolk sow, also, at the same time with the Berkshire alluded to, that did fully as well, having in a period of eleven months had thirty-one pigs, which brought me $45, four of them were reserved for stock pigs, and not counted; and after the removal of the last litter I sold her to the butcher for $31. In all the lots I had but two whinocks.

The sows ran in good grass during the summer, where

they had access to water, and during the period of gestation shifted for themselves. But when they had their little families about them, and a week or so prior to their farrowing, I fed them unsparingly."

Underdraining.—The *Canadian Agriculturist* truly remarks: "The underdraining of land is the foundation of all agricultural improvement."

Good Hogs.—B. F. Hancox & Co., of Holley, N. Y., write the Rochester *Union* that they purchased of D. O. Bailey, of that town, six pigs only nine months old, that weighed respectively 361, 391, 393, 444, 448, and 487 lbs., an average of 420⅓ lbs. each.

A Harnessing Arrangement.—A correspondent of the *Country Gentleman* describes the following method of harnessine and unharnessing a horse to a single wagon: "In the first place my harness is made with a collar open at the bottom, and no buckle, but the hames are fastened to the collar, and there is one buckle to fasten them both. The tugs and hold-back straps are not unhitched; the lines lie over the dash, where they will not get under the horse's feet; they may be unbuckled from the headstall, or remain with it, and all hung up together. I have a wooden hook like an ox-bow, with half the length of one side cut off, so as to hook under the back saddle, collar and headstall. A cord is attached to the long end of the hook, and put up over a pully, and through another pulley, and down to about three feet from one side of the horse. Unbuckle the belly-band and the hame-straps, put under the hook, pull all up, and make the cord fast to a small hook at the side of the carriage-house. A horse will soon learn to place himself back into the breechings when the harness and shafts are let down; three or four buckles are fastened, and he is harnessed."

Leached Ashes.—Prof. Buckland, the able editor of the *Canadian Agriculturist*, says:

"Wood ashes always contain a considerable amount of carbonate of potash, lime, etc., and are consequently very beneficial to such plants as require large quantities of these alkalies, such as Indian corn, turnips, beets, and potatoes. *Leached ashes* have lost much of the principal alkaline salts, and have been deprived of the greatest part of their most important soluble ingredients; still they must not be regarded as an unimportant fertilizer, as the lime and other mineral matter which they contain is always more or less beneficial to the soil. Unless the land is well worked and contains sufficient *organic* matter, we should not consider ashes, whether leached or unleached, as *alone* adequate to the production of a good crop of wheat, turnips, or corn."

There is something about old leached ashes that we do not understand, though we have given the subject considerable attention. We have seen instances where old leached ashes have had an excellent effect on wheat, while unleached ashes seemed to do no good. We have thought that *perhaps* the potash and soda, which had been washed out, were replaced by ammonia and nitric acid from the atmosphere. The subject is one worthy of investigation. At all events, it is certain that leached ashes frequently have a very beneficial effect; and if the above hypothesis is true, the *older* they are the better.

Cutting off the Tops to Prevent Potato Rot.—G. P. Serviss, of Montgomery Co., N. Y., writes as follows to the *Country Gentleman:*

"I had about a quarter of an acre of June potatoes planted on yellow loam ground. They grew finely, and had far advanced to maturity, when I discovered their tops began to be diseased. I immediately took a scythe and cut off the tops of all the rows excepting two near the center of the piece. One of the latter, I left in the state nature had formed it. The other, I pulled the tops by hand, leaving the tubers in the ground.

"Now for the result. At digging time in the fall, I found the tubers in those rows that had their tops cut off, and the row that had its tops pulled off, of equal size, and as near as I could judge had an equal number of rotten tubers in a row, and they were but few. The row that was left as nature had formed it, had about four times as many rotten tubers as either of the rows that had their tops cut off, or the one that had its tops pulled off by hand. Not only that, but the tubers that were not injured were no larger than the tubers were in the former rows. Thus showing conclusively that they had not grown any after their tops became diseased, and that it would have been better to have cut their tops, thereby checking the disease before it extended to the tubers.

"Some farmers recommend digging immediately after the tops begin to show signs of the disease. But I prefer cutting their tops and leaving the tubers in the ground till quite late in the fall, for two reasons. First, they keep their flavor better than they would if exposed to the air. Second, there are sometimes tubers that have been inoculated with the disease which can not be discovered if dug immediately, and if put in the cellar or in heaps in this way, will cause the destruction of many tubers that were free from disease at the time of digging."

Warts on Cattle.—The *Canadian Agriculturist*—good authority—says: "Warts consist in a morbidly increased growth on the outer skin. They generally originate on young animals, and are supposed to be associated with that state of the system when the tissues are in a growing state, as they usually appear during the period of growth, and disappear as age advances. Epidermic warts, when seen in the horse, are found to occupy various situations, as on the nose, eyelids, ears, between the hind legs, or sheath, and under the abdomen. When occurring in cattle, they are chiefly confined to the inferior parts of the abdomen, teats, dewlap, or about the head. The easiest and quickest method of getting rid of warts, when extending over a large surface, is to remove as much as possible with the knife, and apply a hot iron to stop the bleeding, or tie the blood-vessels, and afterwards dress cautiously with arsenical ointment, at intervals of several days. When presenting a well defined neck they may be removed by tying tightly around them a piece of waxed whip-cord; this cuts off all nutrition, and as a consequence they drop off. Calomel is also useful in removing these excrescences."

Cabbages every Year.—J. J. H. Gregory, of Hubbard squash and Mammoth cabbage memory, in a communication in the *Country Gentleman*, lays it down as an improbability, if not an impossibility, to raise good cabbages two or more seasons in succession on the same piece of ground. That cabbage crops succeeding the first will be of *all sorts*—some long legged, and some short legged, some stump footed, and some no footed at all, and all of them *lousy*, and so on through all the catalogue of cabbage infirmities and dispositions.

Sowing Peas.—The *Michigan Farmer* says: "Peas may be planted on any good, dry soil at the earliest moment after the surface is thawed out enough to give earth sufficient to make the furrow in which to sow them. The varieties which we would recommend to sow first would be the Early Kent, Dwarf Blue Imperial, and the large White Marrowfat."

YORKSHIRE PIGS.—A correspondent of the London *Mark Lane Express* gives the weights of three "cottagers' pigs," which were from the same litter, farrowed on the 30th December, 1860. Their respective ages and weights when killed were as follows: No. 1, killed at ten months and five days old, weighed 374 lbs.; No. 2, killed at ten months and thirteen days old, weighed 372 lbs.; No. 3, killed at ten months and eighteen days old, weighed 421 lbs.—equal to an average of 385 lbs. at ten months and eight days old.

SORREL AND OTHER WEEDS.—The *Massachusetts Ploughman* well says: "Where the soil is free of rocks, there is no danger of sorrel prevailing to any extent. A good plow, well held, will bury it deep enough to prevent its appearance through the summer, provided that some valuable plant is encouraged to take its place. Every decent soil will bear something in the course of the summer, and when the farmer neglects to improve his land he must expect to find it green with some kind of vegetation. A good growth of clover will bury all the sorrel and smother it for a whole season. A growth of buckwheat will smother all other vegetation, and come near killing all foul weeds. And buckwheat will grow in very poor soils."

HEMLOCK BARK FOR DRAINS.—GEO. CAMPBELL, of West Westminster, Vt., writes as follows in the *Ohio Farmer*: "Among the various materials that we see recommended for the construction of drains, I do not recollect of ever noticing that of hemlock bark. In sections of country where the hemlock tree abounds, this is one of the cheapest and most durable materials for underdraining to be found. Hemlock timber, cut in February or March, will peel in May, or as soon as we have a few warm days. June, however, is the best time to peel bark, and any one that is intending to do much at the business, would do best to cut his timber in June.

The bark for drains should be cut about four feet in length, and from twelve to fifteen inches in width, and spread out in the sun with the flesh side up, and it will roll up in a few days and be ready for use. If the bark is too thick for the action of the sun to do the work of rolling, a round pole of the size you want the drain can be used, and the bark pressed around and left to dry. It is as durable as tile, and not half as expensive. Try it."

TOP-DRESSING GRASS LANDS IN THE SPRING.—A correspondent of the *Country Gentleman* says: "The fall has hitherto been regarded by the majority as the best season of the year to top-dress grass lands; and, upon close, hard soils, upon flat and level surfaces, it has been practiced with excellent success. But taking New England lands, with rare exceptions, is it certain that the fall is preferable to the spring? I think not, and the reasons for this conclusion are obvious. In the autumn, more than in the spring, top-dressing is exposed to hazards of loss. If the succeeding months are wet, and the earth is washed by continuous rains, much of the fertilizing quality of what has been applied is rendered valueless. It is different in the spring.

Manures or composts applied just after the frost has begun to leave the ground, are absorbed more readily, and the temperature of the surface is rendered several degrees warmer by the covering it has received.

Grass lands that are top-dressed in the spring will be found to come forward earlier than those thus treated in the autumn, and the crop will prove upon trial, to be larger.

I am aware that most farmers can more conveniently attend to this sort of work in the fall than in the spring, and I fear that this is the principal reason which has led them to adopt the practice now so common. The heaviest crop of grass that came under my observation during the last hay season, was a piece of ground about three acres which had been top-dressed in the last of May; and a piece of mowing, upon which was spread, in October, a generous dressing of stable-manure, did not yield nearly so well as a piece of ground adjoining, of the same quality, top-dressed in the same way in the last days of February.

In respect to light, sandy soils, there is not a doubt that top-dressing in April will prove more productive than if done at any other time of the year."

AGRICULTURE IN OREGON.—At a recent Agricultural Meeting in Boston, as reported by the *Massachusetts Ploughman*, Mr. GAREY gave the results of his observations, as a practical farmer, in Oregon during the past eleven years. The climate there, he said, is very different from the climate here. He lives five degrees of latitude farther north than we do, and yet he knows little of frost in Oregon. We have three great valleys, which present our agricultural regions. We have mountains rising to an immense height, of a conical shape, covered with perpetual snow. Our climate is more equal than yours. Cattle have generally lived unhoused through the year.

The cereals are much cultivated. Wheat is a great crop with us, though there is no lime in the soil. [Did n't our friend of the *Ploughman* put this in? He has, we believe, always contended that lime was unnecessary in New England—and in this he may be right. But if there is "*no* lime in the soil," it is certain that wheat will not grow, or any other crop.] The wheat has a very strong stem. I have seen wheat heads from six to eight inches in length. Our average crop of wheat is twenty bushels to the acre. Sometimes we get fifty bushels, though our mode of farming is not the best. One piece of land produced from thirty to forty bushels of wheat to the acre four consecutive years. We raise Fall wheat sowed in February, but the best wheat is sowed in June, and is a year in maturing. Our oat crop is an important one. Indian corn is injured by the cool nights. The best apples in the world are raised in Oregon. The pear and the plum grow well. The cherry grows pretty well, but the peach fails. The pea is raised largely.

The farmer has a great advantage, for he does not have to labor as in New England, the winters being so very mild. The natural grasses are so good, that other kinds are not much cultivated. The soil is not as rich as that of Illinois, but it seems to be more durable.

In Washington Territory there is a different soil, producing vast quantities of timber, the forests standing 300 feet high, or a hundred feet higher than those of California. The trees are pines, arbor vitæ, the yew, etc.

The only nut in Oregon is the hazel nut. The waters on the coast abound with fish. There is much desert in the country, but there are fertile spots amid the deserts. In some cases, irrigation by artificial means is required

MANAGEMENT OF HONEY BEES.

In the month of March we frequently have a few warm, sunny days, almost as mild as June. Such weather is frequently more injurious to bees than the coldest days of winter. If the hives are placed in a winter bee-house, made dark to prevent the bees from leaving their tenements, which is right, the warm atmosphere without will work its way in, and the bees will become aroused from their torpor, or state of hybernation, and will endeavor to escape from their confinement, however dark the room may be.

In such cases, the apiarian is much perplexed, and scarcely knows what to do. Mr. QUINBY, of Montgomery county, who has wintered bees extensively in dark rooms, says that he has often been compelled to place large quantities of ice among his hives, in order to cool the atmosphere around them on such spells of warm weather.

If the weather were to remain mild at such times, we should at once remove the bees to their out-door stands; but in most cases, within forty-eight hours, we again have the thermometer down to zero, or near that point, or a deep snow that would be much worse for the bees if removed, than to remain imprisoned, however warm the weather might be.

The confining of the bees in their hives does not remedy the evil, as the attendant excitement and their struggles to escape are about as destructive as to allow them to leave thir hives at will. In some cases, where no ventilation is afforded but at the regular passage-ways, and these places of egress and ingress being closed with perforated tin, wire cloth, etc., which would give an abundance of air, if the bees would remain between their combs, but they come down and crowd around the openings in such masses that suffocation is produced. This effect is generally produced by the bees generating a dampness, and a chill ensues, which, as night approaches, stiffens the bees, and they become an inert mass at the passages, and prevent all air from entering. In out-door situations, where bees are fastened in their hives, this fatality is much more liable to occur, on account of the more sudden and greater degree of change in the atmosphere on the approach of evening on a mild day in winter or spring. It is, therefore, never good management in winter or spring thus to confine bees, without giving extra ventilation. Raising the hives and placing thin wedges at the corners, about an eighth of an inch thick, is perfect security against suffocation as above stated.

It matters not where or how bees are wintered, the warm days of March and April are periods of great danger in our northern climate. If the bees remain out-of-doors upon their summer stands, the hives should be shaded by placing broad boards against them, which will somewhat darken the passages and keep the interior of the hives cool, and the bees will not desire to leave their hives half so much as they do when the warm rays of the sun strike directly upon them. By raising the hives slightly as above stated, and having the passage ways closed with perforated strips of tin, to run in small wire staples, the bees can be kept in their tenements without much excitement among them, except on *very* warm days, on which occasions, if the ground is *free* of snow, it is best to remove the front boards and allow the bees free exit.

Great care should be taken not to allow the bees to leave their hives when the ground is covered with snow, as vast numbers of them become chilled, and blinded by the dazzling, reflected light, and drop down upon it never to rise.

When bees have been confined in their hives all winter, many of them become unable to fly, caused, perhaps, by not having voided their *fæces*; and if the hives be set out on a moderately cool day, the loss of bees will be much greater than if given their freedom on a warm, sunny day, with a south wind, and the ground entirely free of snow.

It is good management, if the ground be damp around the hives, to strew refuse hay or straw about them a few feet, to afford the bees a dry alighting place; and if the boards that were used to shade the hives be placed one end on the ground and the other against the floor board of the hive, many bees that are unable to fly after having left their hives, will be enabled to enter by crawling up these boards.

I have frequently found it necessary to remove the snow for a space of fifteen or twenty feet around my apiary in the spring of the year, in order to allow the ground in the immediate vicinity of the hives to become clear, upon which I have kept a supply of straw till about the 1st of May; and by a careful use of shading boards, I have often prevented my bees from leaving their hives, without closing the passage-ways. I dislike to obstruct the passages, if I can avoid it, and keep the bees from sallying out when it is unsafe for them to do so; but one who can not be constantly on hand to attend to his bees, had better shut them in.

ROBBING.—As soon as warm weather sets in, even but for a day or two, bees will commence robbing each other's stores. The strong families attack the weak ones; and it does not appear that the robbers are in want of honey at all, but rather have a supply to spare to those that are really famishing. It is the nature of the honey bee to rob, and they seem to exhibit a reckless daring in the ratio of the numbers of the family, and the abundance that they possess.

Weak families, with sheets of comb filled with honey that they are unable to protect, are in particular danger of being robbed. A single bee from a strong family, perhaps, will enter the hive—there being few or no bees at times to guard the entrance; it ascends an outside comb, and near the top finds it well filled with nectar. It fills its honey vesicle, and straightway departs for its home, and there discloses its grand discovery. Yes; it is a fact, that bees have a faculty of *imparting information*. This bee will, probably, inform a dozen others where the treasure is to be found, and this dozen, in turn, will inform as many others, till thousands have infested the robbed hive.

Let a hive be in a state of being robbed, and the bees suddenly ejected, and the hive closed, after a day of fruitless struggles to enter, the robbers will depart. Leave that hive two or three days thus closed, and then on a warm, sunny day open the passage-ways, and mark the result. Presently, a single robber will flit along, singing

a peculiar *war-song*, and, seeing the coast clear, darts in and secures a load of honey, and returns to its home. In a few minutes several bees will flit along, stopping in front of the robbed hive, near the passage-way, still poised on the wing and singing that peculiar robber-song with which all experienced bee keepers are familiar. One by one they enter, and the result is, that frequently in fifteen minutes I have known a previously robbed hive, after a period of being closed, to be assailed by thousands of bees, through information imparted by a single pioneer robber.

The remedy against robbery, is to contract the passage-ways of the hives, not after the damage has been commenced, but before it is effected. Examine your families as you set them out in the spring, and immediately close up the passage-ways of *all* weak ones, so that but one or two bees can go in and out at the same time. Some families that are moderately strong in numbers should have a half an inch of space, more or less, according to the number of bees in the hive. Keep the passage-ways thus closed till the *apple trees blossom*, after which they may be fully opened.

When a hive is discovered fully in possession of robbers, it should be closed at once, and the robbers let out at evening, when the hive should be closed again. In some cases, by removing such hives, if the bees are not wholly overpowered, or by a careful opening of the passage-ways after a day or two, the bees may be saved; but twenty years experience has convinced me that when robbers get control of a hive of bees, it is useless to attempt to save anything but the honey remaining in it.

Clinton, N. Y. T. B. MINER.

THE CARROT—ITS VALUE, PRODUCTIVENESS, &c.

Eds. Genesee Farmer:—Much has been written within the last few years upon the subject of carrot cultivation; and the result is now being made manifest in the greater practical interest awakened, and the more extensive cultivation of that excellent root. In Illinois it is particularly true that during the past season more carrots were raised than had been before for many years. Experience will demonstrate, what thousands are now ignorant of, that this root is one of the most profitable of farm products, and consequently should be produced in greater abundance than it now is. Parsneps, beets, and the different kinds of turnips, are also valuable products; but I reckon the carrot superior to them all. I am prompted to make these remarks from a personal experience of more than twenty-five years. I can not, therefore, refrain from earnestly recommending its cultivation to the readers of your widely circulated paper.

OF ITS VALUE.

Its value, so far as its nutritive properties are concerned, can only be ascertained proximately by a comparison with the coarser grains, as corn, peas, barley, etc. As food for swine, sheep, cows and horses, one bushel and a half of carrots, it is believed, is equal to half a bushel of shelled corn. Others estimate that one bushel of carrots is equal to a like quantity of Illinois corn in the ear—this corn yielding about twenty quarts from one bushel of ears. This may be thought too high an estimate of its value. But supposing it is worth only one-quarter as much as corn, still it is a valuable product. I have exchanged bushel for bushel, and believe this is the general rule of exchange here, though, of course, such an exchange could not be expected in sections of the country where the market price for corn is much higher.

ITS PRODUCTIVENESS.

When it has been proved again and again that from one thousand to fifteen hundred bushels can be raised on an acre, can any man for a moment doubt the value of such a crop? Can a quarter of that number of bushels of corn be raised on an acre? Can you get an equivalent in oats, or rye, or barley? No; I venture to say you could not, with the same amount of labor, on *any number of acres.*

ITS ADAPTATION FOR FOOD.

I find from experience, that when fed to swine, young cattle, sheep, cows and horses, all seem fond of the roots and thrive on them. Pigs can be wintered on them profitably with but little other food, as has been repeatedly demonstrated. Sheep do well on them. Cut fine with a root cutter or other instrument. They should be fed to them in long troughs or shallow boxes; and it is a pleasure to see with what greediness they will devour them. They seem peculiarly adapted to ewes, especially in the spring, before and while they are nursing their young. Milch cows in the fall, winter and spring, also thrive on them, giving a greater quantity and a better quality of milk. I can make in mid-winter more butter and of better quality from a half a bushel of carrots per day, than I could in mid-summer without carrots. They seem to possess some hidden property which gives a healthy tone to the lacteal organs, proving beyond peradventure their adaptedness and value as food for cows. That they are also excellent for horses, has been repeatedly proven. Horses feed freely on them, and, with a suitable quantity of good hay, will ordinarily need but few oats to enable them to perform a great amount of labor; and at the same time will be less liable to diseases of the bowels and chest than when fed exclusively on hay and grain.

What is not least among their recommendatory qualities, is their adaptedness to table use. Most people are fond of them when prepared for the table in the same way as beets. They make excellent pickles. When dried and ground the same as the coffee-bean, they make a very agreeable and healthy beverage. They also make excellent pies, and are pronounced by many as decidedly superior to the best pumpkin pies, prepared as they are very much like them, by the addition of milk, eggs, sugar and spices, after being carefully stewed and mashed.

THEIR CLEANLINESS.

Everyone who has raised them knows how little dirt adheres to them, especially if grown in a sandy soil and dug while the ground is not very moist. This fact is no small recommendation, since the labor of washing before using them is dispensed with.

THE COMPARATIVE CERTAINTY OF A FULL CROP.

No crop that the farmer raises or can raise is more certain than the carrot. The tender plants,

when they first shoot up are not so much affected by little insects as the turnip, the beet, etc. Nor are they affected as much as many other plants by the extremes of weather—cold and heat, wet and dry. When corn and potatoes are wholly destroyed in the spring by protracted cold and wet weather, or in the fall by early frosts, these still flourish and yield abundantly. I do not mean that they are not at all affected by these causes, and that they always yield equally abundantly in cold or warm, wet or dry seasons. No; I only say that they are less affected than most farm products, and hence can be relied upon as yielding a remunerative crop, if the seed be sown at the proper season and the growing plants are suitably cared for.

TIME OF SOWING SEED.

I would recommend that the seed be sown as early in the spring as the state of the weather and ground will permit. They may be sown with safety, however, as late as the 15th of May in this latitude; and if the extreme cold weather should hold off late in the fall, they will attain a good size.

SOIL BEST ADAPTED.

The carrot will grow in almost any soil, as well as in almost any climate. And this is one of its recommendations, and not among the least, of its value to man. It will grow on the hills and in the valleys—on the woodland and on the prairies—in the broad field and in the garden. The soil, however, *best* adapted, is a rich sandy loam. A naturally cold and wet soil is obviously unsuitable, unless it be first thoroughly underdrained. Stiff clay with a hard subsoil is also unfit, unless it be deeply trenched, thoroughly pulverized, mixed with a liberal quantity of well rotted manure, and the redundant water retained in the subsoil be drained off. This pulverization and manuring are requisite on all soils to insure a full crop, as the roots under favorable circumstances will attain to great length. I grew some last year that measured nearly thirty inches in length.

There is probably no better soil or climate in the world for the production of this inestimable esculent than are found in Illinois. Over all these broad and fertile prairies, Nature seems especially to have lavished her blessings in such rich profusion, that it may be produced in enormous quantities, at comparatively little cost. But there are suitable soils and locations on almost every farm in every State and Territory in the North American continent.

METHOD OF SOWING.

If for field culture, the seed should be sown in drills, a suitable distance apart to admit of the free passage of a horse-cultivator. If you wish to use hand-labor alone, the rows may be nearer (18 inches being a suitable distance), and the plants may be left to grow from 5 to 10 inches apart in the rows. The seed may be sown with the hand or seed-drill, making a liberal allowance for poor seed, the destruction by worms and other casualties. Some prefer to sprout the seed before sowing. In this case, it will have to be sown by hand, as this process unfits it for a free distribution by the drill. In soaking the seed, great care should be taken not to sprout them too much before sowing. As soon or before the tender germ is visible, it should be sown. Previous to sowing, it should be mixed as wanted with a sufficient quantity of dry sand to enable it to escape freely from the fingers. The process of sprouting has one advantage: it pushes the growth of the plant ahead of the weeds, so that it is not so much work to weed them. Whether sown wet or dry, the seed should be put in immediately after the ground is prepared for it, being careful to sow the rows perfectly straight and equi-distant from each other. If the seed be sown dry, it may be sown with a hand-drill, with great accuracy and rapidity. With a good drill and clean seed a man will sow from one to two acres per day.

METHOD OF HOEING.

As soon as the young plants are up, and the line of the rows can be distinguished, the stirring of the ground and the killing of the weeds should be commenced. This work should not be delayed a single day, as a great saving of time and labor is thereby effected.

By the help of labor-saving implements, of which there are many, thiswork (the most dreaded and discouraging of all in the raising of this crop) is made comparatively easy and light. Thus the labor of raising carrots is reduced more than one-half. Let no one, therefore, be deterred from raising them through fear of the fancied cost in cultivating, since the labor can be so much reduced. Let every man use all the helps that science and invention have placed within his reach, to increase the product of this valuable esculent. What golden treasures may yet be dug out of the earth in these yellow roots! What immense wealth may yet be added to the nation by their more general use among stock growers in every part of this vast agricultural domain! Let each individual who has it in his power contribute his mite to swell the aggregate of that wealth; for he who shall do it will be deserving of rich enconiums and prove himself a benefactor.

McHenry, Ill. O. R.

HORSES AND THE WAR.

THE Secretary of the Vermont State Agricultural Society, in his Annual Report, remarks:

The number of horses in Vermont before the breaking out of the rebellion, was about fifty-five thousand, since which time, it is calculated that nearly ten thousand have been carried from the State for army purposes. This immense levy for horses has been made throughout the entire country. When it is considered that comparatively few of these horses will find their way back: that the number that will die of disease or become unfit for service is twenty times as great as it would be were they used in other kinds of business: that to meet this great want of the government, a large proportion of the business horses in our large cities, which have been thrown out of service by general prostration, have been bought up: it readily appears that, even during the war, horses must advance in price; and at its close, when business shall revive and trade resume its former channels, the demand for good horses must exceed the supply. Reasoning from these premises, no more profitable labor can be engaged in than the production of good business horses."

MYSTERIES OF THE POULTRY YARD.

If we call to mind the many and valuable acquisitions from both the animal and vegetable kingdoms which have been made subservient to the use of man within comparatively a very recent period, it is not too much to believe that others of nearly or quite equal value, still remain to reward the labor and pains of a persevering search. Then the whole of Central Africa, Central Australia, great part of China, and Northern India, and innumerable half-explored or unexplored islands, all waiting to be ransacked for our benefit. And without depending upon these distant regions, we know not yet what we may find at or near home; the Capercali, by an easy importation, has been rescued from extinction in Great Britain.

Amongst the living tributaries to the luxury of man, the turkey is an example of the results yet to be expected from the exploring spirit of our day. It is the most recent, and, except the hen and the goose, the most valuable of our domesticated birds. We may, indeed, call it quite a new introduction; for what, after all, is a period of three hundred, compared with the time during which man has had dominion over the earth and its brute inhabitants? The obscurity which hangs over the transmission of the turkey from America to Europe, and which there is little chance of clearing away, except by industrious ferreting amongst old family records and memorandum books, shows that those who introduced it to the Old World had no idea of the value of what they were importing; but probably regarded it like any other remarkable production of nature. The young would be distributed among friends; these again would thrive and increase, and the nation would suddenly find itself in the possession of a race, not of pleasing pets, but of valuable, prolific, and hardy stock of poultry. Such we take to be the history of the turkey in England; and zoological and ornithological societies may hereafter find that some creature that was designated, or undervalued, or even yet unobtained, will prove unexpectedly domestic and profitable, (it may be the Cropses, Curassow, Guyan, or the elegant Honduras turkey,) to further which great object of these associations, they can not do better than communicate spare specimens, on the most liberal and encouraging terms, to such persons as they believe competent fairly to test their value.

The reason why the turkeys seen in our poultry yards do not vie in splendor of plumage with their untamed brothers, is that we do not let them live long enough. A creature that does not attain its full growth till its fifth or sixth year, we kill at least in the second, to the evident deterioration of our stock. But let three or four well-selected black or bronze turkeys be retained to their really adult state, and well fed meanwhile, and they will quite recompense their keeper by their beauty in full plumage, by their glancing hues of gilded bronze and black, and the pearly lustre that radiates from their polished feathers. In default of wild specimens, birds like these are sought to complete collections of stuffed birds.

The demand for such large birds among the poultry dealers, the temptation to fat them before they arrive at this stage, are so great, that few farmers can resist sending their 14 to 18 lb. cocks to market, while a young cock of the year, they think, will answer every purpose next spring as well. Some even deem it an extravagance to keep a turkey cock at all, if they have not more than two hens, while they would send on a visit of a day or two to a neighbor who has a male bird.

When the hen has once selected a spot for her nest, she will continue to lay there till the time of incubation, so that the eggs may be brought home from day to day, there being no need of a nest egg, as with the common fowl. She will lay from 15 to 20 eggs, more or less. Her determination to sit will be known by her constantly remaining on the nest, though empty; and as it is seldom in a position sufficiently secure against the weather or pilferers, a nest should be prepared for her by placing some soft straw, with her eggs, on the floor of a convenient out-house. She should then be brought home and gently placed upon it. It is a most pleasing sight to witness the satisfaction with which the bird takes to her long-lost eggs, turning them about, placing them with her bill in the most suitable position, tucking the straw around and under them, and finally sitting upon them with the quiet joy of anticipated maternity.

Thirteen eggs are enough to give her; a large hen might cover more; but a few strong, well-hatched chickens are better than a large brood of weaklings, that have been delayed in the shell perhaps twelve hours over the time, from insufficient warmth. At the end of a week, it is usual to add two or three hen's eggs, "to teach the young turkeys how to peck." The plan is not a bad one; the activity of the chickens does stir up some emulation in their brethren; the eggs take but little room in the nest; and at the end of the season, you have two or three very fine fowls, all the plumper for the extra food they have shared with the young turkeys.

In four weeks the little birds will be hatched; and then, how are they to be reared? Some books tell you to plunge them in cold water to strengthen them; those that survive will certainly be hardy birds (an experiment which some women are cruel enough to try upon their own offspring.) Air and exercise increase the strength of any growing animal; but cold and hunger only dwarf and weaken. Others say, "make them swallow a whole pop-corn;" which is as if we were to cram a Spitzenberg apple down the throat of a new-born babe. Others again say, "give them a little ale, beer, or wine." We know, unhappily, that some mothers are wicked enough to give their infants gin, and we know the consequences.

Follow nature; give them nothing; do nothing to them; let them be in the nest under the shelter of their mother's wings, at least eight or ten hours; if hatched in the afternoon, till the following morning. Then place her on the grass, in the sun, under a roomy coop. If the weather be fine, she may be stationed where you choose, by a long piece of list tied round one leg, and fastened to a stump or stake. But the boarded coop saves her ever-watchful anxiety from the dread of enemies above and behind—the crow, the hawk, the rat, the weazel—and also protects herself (she will protect her young) from the sudden showers of summer. Offer at first a few crumbs of bread; the little ones for some hours will be in no hurry to eat;

but when they do begin, supply them constantly and abundantly with chopped eggs, shreds of meat and fat, and boiled Indian meal mixed with chives or lettuce chopped fine. Mutton suet, poured over shorts or middlings, cut up when cold; also, liver boiled and minced, are excellent things. The quantity consumed costs a trifle; the attention to supply is everything.

The young of the turkey afford a remarkable instance of hereditary and transmitted habits. From having been attended for many generations with so much care, they appear naturally to expect it almost as soon as they are released from the shell. We are told that young pointers, the descendants of well-educated dogs, will point at the scent of game without any previous training; and so turkey chicks seem to wait for the attention of man before they can have any experience of the value or nature of their attentions. Food which they would refuse from a dish, they will peck greedily from the palm of a hand; a crumb which would be disdained if seen accidentally on the ground, will be relished from the tip of the finger. The proverb that "the master's eye fattens the hare," is applicable to them, not in a metaphysical, but in a literal sense; for they certainly take their food with a better appetite if their keeper stays to distribute it, and *see* them eat it, than if he merely set it down and left them to help themselves.

We believe this to be the case with more domesticated animals than we are aware of, and appears natural enough if we remember how much more we enjoy a meal in the society of those we love and respect, than if we partook of it in indifferent or disagreeable company.

The turkeys then are hatched, and we are rearing them. Abundant food for the mother and the young, constant attention to their wants are the grand desiderata. An open glade in a grove, with long grass, and shrubs here and there, is the best possible location. The long grass will afford them cover from the birds of prey; the hen will drive off four-footed enemies with great courage. We have been amused with the fury with which a mother turkey has pursued a squirrel, till it took refuge in the branches overhead; what instinctive fear urged her we know not. Insects, too, will abound in such a situation. When the little creatures are three or four days old, they will watch each fly that alights on a neighboring flower, fix it with mesmeric intensity, and by slow approach often succeed in their final rush. But in the best position you can station them, forget them not for one hour in the day. If you do, the little turkeys will for a time loudly yelp, "O, then, remember me," in notes less melodious than those of a *prima donna*, and then they will be sulky and silent. When you at length bring their delayed meal, some will eat, some will not. Those that will not, can only be saved by a method at all other times unjustifiable—namely, cramming; but it must be done most gently. The soft crumb of bread rolled into miniature sausages, should be introduced till their crops are full. For drink, many would give ale or wine; we advise milk. The bird wants material, not stimulant. It has been actually wire-drawn. It has grown all the hours you have neglected it, without any thing to grow from. Like a young plant in the spring season, it will and must grow; but has no roots in the fertile earth to obtain incessant nourishment. The roots which supply its growth are in the stomach, which it is your office to replenish. "Prevention is better than cure." Such a case ought never to occur in a well-cared for poultry yard.

The time when the turkey hen may be allowed full liberty with her brood, depends so much on season, situation, etc., that it must be left to the exercise of the keeper's judgment. A safe rule may be fixed at the season called "shooting the red," a "disease," as some writers call it—being about as much a disease as when the eldest son of the turkey's master or mistress shoots his beard. When young turkeys approach the size of a partridge, or before, the granular fleshy excrescences on the head and neck begin to appear; soon after, the whole plumage, particularly the tail feathers, start into rapid growth, and the "disease" is only to be counteracted by liberal nourishment. If let loose at this time, they will obtain much by foraging, and still be thankful for all you can give them. And now is the time that turkeys begin to be troublesome and voracious. What else can be expected from a creature that is to grow from the size of a robin, to 12 or 14 lbs. in eight or nine months? The only way to keep them from rambling, is to feed them well and regularly at home.

C. N. BEMENT.

RYE FOR BRINGING LIGHT SOIL INTO CONDITION TO PRODUCE WHEAT.

Eds. Genesee Farmer:—In a former volume of your excellent monthly text-book for farmers, the fact was alluded to, that for some years past, since the spirit of research and improvement (in a large degree due to Liebig's discoveries and inculcations) in agriculture more generally set in, large tracts of light *sandy* land, some of it so light that it blows and drifts, in Silesia and contiguous districts in Germany, had been much improved by the growing and plowing in of successive crops of rye and lupins—the lupin being a leguminous plant, a small species of bean. It was shown, that by plowing in these crops in succession the *same season*, so much humus or vegetable mold was accumulated in the soil, that its color was changed from that of a light sand to that in apperance of a darkish loam, and its quality from that of a merely rye-growing sand to a soil producing fair crops and quality of wheat. Such, if my memory is correct, were the almost immediate results of this simple means of renovating sandy soils—means not costly, nor difficult, nor laborious, nor tedious of application, but so simple and easy of demonstration, as to be within the reach of every cultivator of a farm, however limited his means, or the extent of his possessions; a method of improving poor light soils, so accessible and economical, that not one of us need allege any other excuse but a want of will and perseverence, if hereafter we allow our light sandy soils to become unprofitable by reason of a deficiency of humus or vegetable mold in them.

But my object, at present, was to refer to a peculiarity of the rye plant—namely, its power of transforming silica or sand itself into its own growth and substance—*i. e.*, that of its straw.

Rye straw is stiffer than the straw of either wheat or oats, as is shown by its much taller

growth, it being equally erect and more elastic than either oat or wheat straw. The greater extent of silicated surface in a crop of rye straw will probably be in excess of that of oats and wheat, for the same number of plants, in about the degree that rye straw is the taller or larger of the three. We cannot determine this with exactitude, nor is this necessary; for, though their composition is similar, wheat will not flourish on many soils, for which, in the same condition, rye does tolerably well. (It is to this fact that may, in part, be ascribed the settlement of Germans on much of the poorest and most sandy land in the West, as for instance the settlement of New Holland, Michigan, and the more extensive, though scattered one north of the For or Neenah river, Wisconsin. These plodding, industrious and eminently worthy citizens have been familiar with rye on sandy lands in Germany; and rye bread is their staple food in many instances—hence they can live on lands too poor to support costlier habits.) It is, however, a familiar fact that rye will flourish on soil too sandy, too deficient in vegetable mold to produce a crop, or half one even, of wheat. The question I wish to suggest is: To what peculiar power in the rye plant is this success due? When both plants grow on similar soil, there is no essential difference in their general composition apparent. But when rye flourishes where wheat will not, where the soil is too sandy, I have long thought such success due in a considerable degree to the power of the rye plant to dissolve silica in a greater degree than is true of wheat; because its composition, when grown, shows that it did dissolve, for it comprises more in its straw than wheat does.

One reason why wheat succeeds after the quantity of humus or vegetable matter has been increased, is undoubtedly to be found in the greater supply of ammonia or nitrogen, of which wheat requires a little more than rye, that is found as constituent of all vegetable matter in the soil. The substance of rye plowed in supplies this necessary to wheat. But this does not explain why rye will grow where wheat fails.

If, as I suspect, the success of rye is due to a peculiar power in dissolving silica more rapidly than is true of any of our other well known cultivated plants, then the inference suggests itself that rye is precisely the plant to *prepare silica*, and perhaps *other* minerals, for more delicately constituted plants, like wheat, oats and corn. There are certain elementary *forms* of mineral matter, which some plants have no power, even with the aid of the great transforming agent, oxygen, to modify or break up. This may be true as to wheat in relation to crude silica. Other plants differently constituted, in some peculiarity, have such a power. This may be true—and if it is not, I am mistaken—of rye in relation to crude silica.

Often, silica has been changed from its crude form by the rye plant, its original crude and, to wheat, unassimilable form, has been broken up and changed, and thus reduced to a *different* or *new* form with *new proportions* suitable for the nutrition and growth of wheat. We know that one animal can digest and assimilate substances that are impossible of digestion with another. And the succession of different species of plants on the *same* soil proves something like this to be true of vegetables. If rye has this power, it may be turned to good account in bringing the crude mineral of sandy soils into a condition suitable for the nutrition and growth of wheat, which is of more general importance and value. J. W. CLARKE.

Wisconsin.

A USEFUL IMPLEMENT.

ALL farmers and gardeners have felt the necessity of some hand implement, to enable them to cultivate crops planted or sown in drills, from one to two feet apart, with less labor than that of using a common hand hoe. The cultivation of field crops of beets, onions, carrots, turnips, etc., in drills twelve to eighteen inches apart, by the use of the hoe alone, involves a good deal of time and expense, and if we can contrive, or invent any implement, with which we can do the work more effectually, and in less time, than can be done with the hoe, we should avail ourselves of it.

I am now making for my own use a couple of cheap *hand harrows*, to run between the rows of vegetables, as soon as up, and so frequently thereafter, that the weeds will be effectually kept down by it, except immediately *in* the rows, which may be pulled out rapidly by small boys, who can do little else.

To illustrate the use of this implement, I will take a field of carrots, sown in drills fifteen inches apart. The land should be free from stones, and large clumps of earth, where the seed is sown, as *all* lands should be, when sown to drill crops, and as soon as the carrots appear, let a drag be *pushed* through the rows, made as follows:

Take a hard wood plank, two inches thick, and one foot wide, from which cut off a piece eighteen inches long; then cut off one end with a broad ax, or a hatchet, so as to turn up, like the runner of a sled, so far as the thickness of the plank will admit. Into this plank drive spikes (40 penny nails) in rows, from one to two inches apart, till it is completely filled, up to the curve in front, which will leave the small ends of the nails protruding long enough to make an effective harrow on a small scale. On the back of this harrow, a little past the center towards the back end, attach a handle of suitable length, secured to an iron strap with two arms, coming to a union twelve or eighteen inches above the drag, where a shoulder should receive the handle, which should have a cross piece at the end to take hold of to make it complete.

The cultivation of the crops consists merely in pushing this drag before you, about once in two weeks, through the rows, a man going over an acre in two hours, leaving the thinning out and weeding on the line of the rows to boys.

I have learned that this system, differing merely by *drawing* instead of *pushing* the implement, has been practiced by an inventive "Yankee," with the most complete success; and if it be feasible, I shall avail myself of its advantages next season, and I hope that others will make a trial of it, since none of us are too old to learn. Different sizes will be required for different width of drills, and it remains to be shown, how near the width of the drills the drags, or rather *pushers*, can be made, and not cut up the crops. T. B. MINER.

Clinton, N. Y.

CULTIVATION AND USE OF WILLOWS.

The Transactions of the Highland and Agricultural Society of Scotland contains an essay on the above subject. It was awarded the gold medal of the Society. A few extracts will be read with interest.

The importance of willows to man has been recognised from the earliest ages. A crop of willows was considered so valuable in the time of Cato, that he ranks the willow field next in value to the vineyard or garden.

I need not enumerate the various purposes for which they are employed, but simply remark that the basket maker, the turner and the cooper, would be less economical and useful were it not for the genus Salix. Charcoal and cases of lead pencils are also made from willow wood. Boards and planks of the willow are well fitted for scaffolding, and sheeting for carts, lofts, etc.; and in localities where small timber is scarce, we cut it up for paling rails. Being of a tough nature and light, it is very well adapted for these purposes. The very best kind of charcoal is made from willows, and is highly esteemed in the making of gunpowder. The bark is used for tanning several kinds of leather. So from this we may learn that the consumption of willows, if more extensively grown, might be greater; and plantations, or large beds of osiers might be very advantageously grown in almost any soil, such as banks of rivers, drained moors, etc, and, annually cut, would produce a sum of money that I have no doubt would largely remunerate the grower. And from land that can not otherwise be made available for tillage, notwithstanding the vicissitudes of seasons, taking good and bad under view, the writer has experimentally ascertained that an acre of willows or osiers will often bring the grower a larger sum of money than an acre of wheat; and likewise from land that would be almost useless for other crops.

It is rather astonishing that the growth of them is not more attended to both in England and Scotland.

As regards the nature of the soil and subsoil suitable for growing them in to the best perfection, osiers delight in banks of rivers or drained moors, and are greatly invigorated by occasional floods or irrigations. Plantations of them may also be formed, and will succeed well, on low spongy bottoms along the margins of streams.

In the great majority of farms will be found level, marshy, wet spots, which, by drainage, can not well be made available for tillage, which might be planted with the willow, and would afterward recompense the proprietor or farmer in a two-fold way. The land might be prepared in various ways for this crop, owing to the extent and nature of the soil. Where the land will admit of being plowed and harrowed, and has formerly undergone cultivation, I find that, at the present prices of willow sets or plants, and the expense of labor, it would not cost more than $44 per acre, allowing the plants to be planted at a distance of 28 inches by 18 inches apart. But I find that for plantations of any considerable extent for osiers, the ground should be formed by the spade into beds of from 8 to 9 feet broad, with intervening furrows or narrow ditches to carry off the water. The plantation may be made at any time between the fall of the leaf and an advanced period in spring; but the last two weeks of February and the first week of March are the most proper times for planting the willows. Cuttings 15 inches long should be taken with a knife on an upward slope from well ripened wood of either two or three years growth; experimental trial convinces me that they grow more luxuriantly when planted about two-thirds of their length in the ground, than when they are less deeply planted.

Having at one time about an acre of willows under my care, it all received the same preparation; but after the number of cuttings required were lopped off from the plants of second year's growth and dressed to the length of 15 inches, I caused the sets or cuttings of No. 1, or one-third part of the said acre, to be put in the soil to the depth of 10 inches. No. 2, as another third part of the same, had its cuttings planted to the depth of 7 inches. No. 3, another third part, planted to the depth of 4 inches. A decided difference was yearly to be seen in the growth of the plants—No. 1 producing in autumn of the third year one-fourth value of more willows than No. 2; and No. 2 equivalent, or nearly so, to the same value over No. 3. I can learn from frequent trials that, when depth of soil can be obtained, osiers succeed best in a deep, moist, free soil—ground dug to the depth of 24 inches, with a small quantity of dung and old lime rubbish put in the bottom of the trench.

The willow, for the use of the basket-maker, should be cut every year slopingly with the knife, within three buds of the point whence the shoot issued, and will admit of being cut back once in three years for the use of the cooper, exactly to the swell of the shoot of the three years growth—thus compressing the plant back to its ancient dwarf form, at the same time realising a handsome return.

Moreover, by treating osiers in this way, they will last and produce well for a great many years. The ground should be deeply stirred with the hoe and kept clear of weeds; but digging with a spade around the roots of willows often proves very hurtful to the fibrous feeders, as we often meet with a great portion of such oozing and growing very near the surface of the soil. Plantations of osiers thus treated, notwithstanding the vicissitudes of the seasons, will bring the grower at least the sum of $60 for every year after they arrive at their full stage of growth. This sum of $60 I have minutely tested, can be at the present time realized from an acre of willows, after all expenses of cleaning and cutting down the crop are deducted.

The way in which willows are most commonly disposed of after being cut is—they are sorted into trusses and tied into bundles of two and sometimes three feet in circumference; and if intended to be stripped of their bark, they are set on their thick end, immersed a few inches in standing water, and left there until the latter part of the following month of May.

It has of late been asserted by various respectable parties that as high a sum as from $65 to $70 of net profit, and sometimes more, could be derived at the present time from an acre of willows, under very ordinary treatment. They succeed best in

northern exposures, provided they are not overtopped. Should the ground be at all suitable for the crop, each set will produce the first year two good basket-rods, or 24,000—worth 12 cents per 100 or 120. The second year, the sets, being much stronger, will produce on an average six rods, one more or less being considered a very common number—one of which may be left on each stock for hoops, and the remaining 60,000 cut for baskets, which would be worth about $120. By the third year there ought to be at least 12,000 hoops, worth $1 per 100 or 120, and from 28,000 to 29,000 rods, worth at least $67.

MAKING MAPLE SUGAR.

The superior flavor of maple, and high prices of other sugar, will lead every one, this year, to tap the maples. Experience commends the following peculiarities in making maple sugar:

Tapping the Trees. — If small, boring with a bit from a quarter inch to an inch will injure trees less than gashing. It is not useful to tap very deep. Half an inch to an inch beyond the bark is sufficient. Tap high enough to have the bucket out of reach of animals.

Buckets.—If new ones are to be obtained, tin, round shape, of about ten or twelve quarts capacity, well wired at top, and made just slanting enough to pack into each other — with an ear soldered on or made by a loop in the wire to hang them to the tree—will be found cheapest and best—most cleanly and most durable in proportion to cost. Such cost, here, 30 cents each.

Spouts:—Sheet iron (old refuse or scraps may be used) cut three or four inches long, and an inch and a half wide at one end, and an inch at the other—filed or ground sharp at the broad end, and then rounded by a blow when placed between a hollowed piece of hard wood and a rounded one to match—makes the cheapest and best spouts. Drive it into the *bark* with a hammer.

Hooks.—Go to a smith shop and pick up the old nails taken from horse-shoes; straighten them; hammer the points flat; and, placing them edgewise on the anvil with the head over the edge, or over the hole in it, draw the head to one side. Drive them into the tree below the spout sufficiently to support the bucket—and your tapping is done.

Gathering.—A cask, with tunnel to fill by and faucet for emptying, and a sled, are the best implements, whether you use a team or hand labor for getting sap home.

Boiling Apparatus.—Pans, made by thickly nailing sheet iron to plank for the sides, and turning up the iron for the ends, are cheapest and best. Set them over a mortar-laid arch a foot narrower (six inches on each side) than the pan—having a faucet at one corner of the pan to draw off the syrup. Have chimney sufficient to keep a flame under your pan. Have a regulating faucet to your sap reservoir, and let the pan be fed by a stream that shall fill as fast as it evaporates.

Sugaring Down.—Use a kettle of iron or brass, with the bottom on the ground, and keep a quick and uniform fire around it till the sugar (or syrup, if you desire) is done. If you wish white sugar, cook it only so as to grain; pour it into a bucket, and when it crusts over, tip it on edge to drain. The drippings will be good maple molasses. Cleanliness, most scrupulous, is the only direction we urge in the manufacture—leaving clarifying processes to be used, of course, as each one may find best by experience or common information.

Closing Up.—See that your buckets and pans are *clean* and *dry*. Spouts, ditto. Draw the hooks, not merely for future use, but to save your axes and saws if you ever use the tree.

Attica, N. Y.

THE OLD AND THE NEW ORDER OF FARMING IN ENGLAND.

A "Practical Farmer"—one of the oldest correspondents of the London *Mark Lane Express*—furnishes that journal with an interesting sketch of the Old and New School farmers of England. We copy what he says of the Old School. The remainder will be given next month.

Take him in person: the burly personification of old honest "John Bull," in his holiday dress—his large broad-brim, full neckcloth, frilled shirt showing gaily from his capacious waistcoat, (not vest,) his nether garment—*i. e.* breeches—of buckskin, his long, straight, loosely-fitting coat, and heavy top-boots, all of the best materials, and made after the Sir Tatton Sykes type, and now, in good specimen, occasionally to be met with in Somersetshire. In his every-day dress he would have been found in his slop of blue and his stockings of grey, his chocolate tie, and his buckled shoes, disdaining gloves and gaiters. In his daily habits he would have been found to rise with the dawn in the summer, and long before it in the winter. He would breakfast at five, dine at twelve, sup at seven, and to bed at eight; his meals consisting of meat, bread, and beer, morning, noon, and night; occasionally joining his wife in a "cheery cup of tea," as a token of a kind and compassionate feeling for womanly weakness. His employments were not very complicated or numerous—business the same in fact and order as it had been for a century previous. His place was with his men, working with them, directing the operations, and merely taking upon himself the higher departments of labor. He would be seen in winter, in all weathers, at the earliest dawn, leaving the threshold with his "fork and fothering-band," making his way to "top twenty closen," where were located some half-score hardy steers, dependent upon him for their breakfast off the haystack, which invariably, from time immemorial, had been stacked in the precise corner most sheltered. From thence he would visit the sheep, helping them to a few bents of hay each, and an occasional bite of turnip, which now began to come into use amongst the improving farmers, who had heard of "Norfolk turnip-growing;" attention to, and superintending his stock being his especial department; the shepherd (a sort of supernumerary) working under his master—if, indeed, such an appendage was attached to the farm. His "shepherding" done, he saw to his thrashers, who, with flail in hand, were beating out the corn in his ample barn as best they could. His carters were winter-ploughing, or leading out the manure

to the mixen; his hedger was plashing and repairing the fences; his "pig-boy" attending to the swine, boiling the potatoes, and mixing the meal; and his dairy-maid milked her cows, and did the kitchen-work. His wife managed the house, the cooking, and her children. Nearly all was done "within themselves." There was neither thought nor enterprize in all their economy—as did their fathers, so did they.

In the summer, spring, and autumn the various duties were carried through in a similar way. The master taking the higher work, he was the seed-sower of the farm. With "hopper hanging to his shoulder," he sows the wheat, the barley, the oats, and the rye. The beans were mostly dibbled. Peas, as a crop, were scarcely known. In the summer he attended to his stock, worked with the weeders, superintended his men, took his place at the sheep-shearing, often joined them in mowing the grass, as in making and stacking the hay. In harvest-work he was first and foremost, as if the whole depended upon himself. He would be up with his reapers and mowers, and he would "pitch" or "stock" the corn. In fact, the common farmer of the days I speak of was a hard-working man. He was a model of industry; and he contrived, with strict economy, to "pick up a living" in a most homely and inexpensive way. The commercial, and what is now termed the "scientific" part of his business never troubled him a whit. True, driving his "cartee," and with his wife, he attended his usual market, to sell his corn, and she to sell her poultry, butter, and eggs; besides, "our fair" always found him behind his stand of cattle, or his pens of sheep, or his gelding or young horses; but here ended his commercial transactions. The main feature in his farming was, to have something to sell, nothing to buy. The purchase of seed for change, of artificial manure (then scarcely known) to aid his coleseed crop or the few turnips he cultivated (mangolds were then unknown) never entered his head. Nor did he care a rush to procure a better bull or a better ram. To him a bull was a bull, and a ram a ram, and that was all, provided they would get stock; and although the breeding of his horses was more commendable, yet it did not depend upon his forethought, but upon the general custom to travel entire horses of repute. The strides that have latterly been made in every department of modern agriculture were unknown to him. His lease was his text-book and guide; his account-book, the balance in his stackyard when all was paid—"That's mine!" My rent, tithe, taxes, rates, Christmas bills all paid—"That's mine," as he looks upon the standing stack; and that is, in fact, the balance of his last year's account (yes; and a balance which many a good modern farmer would have been glad to find during the past three years.) He never seriously thought how his farm could be made more productive by introducing new-fangled schemes of management, and new-fashioned implements, and new kinds of stock. He would have sooner thought a man doing this would probably lose his farm. His first inquiry would, likely enough, have been, "What would *Mr. Coz* or *his lordship* say? We shall all want new leases; and that means a raise of rent. No, I shall let things alone: I won't go first." Thus for ages was the intellect of the farmers cramped and curbed, and their minds kept down to certain definite courses; and he was thought a daring, presumptuous man, who ventured to strike out a new path for himself. It can not be wondered at. The absence of knowledge and enterprise led to the adoption of every course in farming likely to save expense. Men did not travel as they do now. Learning was a difficulty of great magnitude. Where was a plain man to obtain knowledge? Now, everywhere it is to be found. The world teems with information. A man can not, if he would, be ignorant. It meets him at every point, at every turn. He must, in spite of himself, gain knowledge—yes, knowledge of the most useful kinds. But what was a man to do, fifty or sixty years since? He might hear of the Holkham Sheepshearing, or the Woburn Gatherings; but they were thought to be gentlemen's schemes, that could do the farmer no good; and so he sets himself to save and save. He must reduce his laborers' wages. He must not hire a servant for the whole year. It makes one pauper more; and that increases the poor's-rate. The taxes are heavy; and he must lay aside his "cartee," and his wife must mount the "pillion." The boys must come to work, and save schooling. The girls don't require any. Tom may manage the pigs, and do the boy's work, and Ben attend to all the little matters. The girls must help their mother; and the lass must have less wages, or leave.

HUNGARIAN GRASS.

I HAVE grown this grass for several years and find it a profitable crop. I sow a half a bushel of seed to the acre, about the 25th of May, but it may be sown as late as the 10th of June, and produce a good crop. But when sown the last of May, it is ready to cut before the dry, warm weather of summer is past, and is more easily cured than when sown later.

Three tons per acre is a fair average crop on good land. If it be left for the seed to ripen, it makes almost as good hay as when cut earlier. Indeed, the seed is mostly matured when the grass is ready to be mowed. Twenty to thirty bushels of seed are produced to the acre, worth $1 per bushel to feed out to stock, either ground or whole.

It is supposed that this grass impoverishes the land very rapidly; but I am not fully prepared to endorse this opinion yet. I will, however, state a circumstance that occurred in my experience with it. I sowed a field of rich sod land, that had not been plowed for 40 years, nor since the timber was cut off that was growing upon it when first settled by immigrants, about the year 1800. The crop was enormous. The next year the same land was planted to corn, and the crop was almost a total failure, although the season was favorable to its growth. It it probable that the Hungarian grass draws such constituents from the soil as corn chiefly feeds on, to such an inordinate degree that a corn crop can scarcely be produced upon land where it has been grown, without an application of manure.

In regard to the alleged injury to stock, by feeding them on Hungarian grass, I will observe that I have not experienced any disadvantage at all in

feeding it to horses or cows; but from reading all, or nearly all, the statements that have appeared in the agricultural papers, during the past few years, in regard to this grass, I am led to consider that in some instances it has proved injurious to *horses*, but never to any other kind of live stock. This injury appears to have arisen from the very oily nature of the seed of this grass; and it being fed out generally without thrashing, horses eat abundantly of the seed ends, leaving the butts, and at the same time being fed freely on grain, they become weak and stiff in the joints; but exactly how this is effected, has not yet appeared. It has been recommended, therefore, not to feed grain very freely in connection with this grass, and I think the suggestion a good one.

For cows, and all stock to which hay is fed, the Hungarian grass is excellent. But the injurious effects arising from feeding it to horses are so rare, that it is not yet a *settled* point whether the injury complained of is really caused by this hay or something else; but time will soon decide the question.

I notice that Hungarian grass seed is selling at the West at about the price of oats, 25 or 30 cents a bushel, while it sells at the East much higher.

Clinton, N. Y. T. B. MINER.

WHY DOES SHE KICK THE MILK OVER?—"Like a cow that gives a good mess of milk, and then kicks it all over," is the proverb that is applied to the man that does a kind act and follows it with a foolish or damaging misdeed. Proverbs are founded on practical truths. It is a truth, then, and a common one, that "a cow gives a good mess of milk, and *then* kicks it all over." If a fact, the proverb must be not merely a truth, but one founded in reason. So, if the cow stands quiet till "a good mess of milk" has been drawn, there must be a reason for her kicking it over afterwards. And, the reason for her kicking being withdrawn, the probability is that the kicking will either cease or not come in just after milking Should any reader chance to own one of these *proverbial* cows, he *may* observe that the signal for that kick is the milker's allowing his fingers to slip from her teats with a jerk in stripping. If so, just cheat the old cow out of the signal, till the "good mess of milk" is beyond the reach of her kickers! —‡‡ L. S. ‡‡, *Attica, N. Y.*

MECHANICAL TOOLS FOR FARMERS.

No good farmer should be without a set of mechanical tools sufficient to enable him to do such repairing of his agricultural implements as any man can, and ought to do, rather than employ a professional mechanic.

In the first place, you require a room in some out-building in which to keep your tools, and to do your mechanical work. A work-bench, which any man can make in a few hours, is first to be erected, near a window. Over this bench, against the wall, place a shelf about a foot wide and 12 feet long, and under it put up a rack for your small tools, such as chisels, gimblets, brad awls, etc.

The following are among the principal tools needed: a handsaw, broadax, hatchet, two or three planes, hammers, chisels of various sizes, a half a dozen gimlets, an iron square, a carpenter's two-feet rule, etc. Let all the tools be of the best make, and have a sufficient variety to enable you to do any small job that it is possible for any one to do, who is not a mechanic by trade.

Procure a large and various supply of nails and screws—wrought nails of different sizes, clout nails, brads, tacks of the larger sizes—and have them so arranged that you can lay your hand upon any kind in an instant. You will be surprised with what ease and skill, after a little practice, you will be able to "tinker" up your tools out of repair, and even to make new ones, during the winter season.

With a good set of tools, and all in complete order, when a door, lock, or anything else gets out of order on your premises, you will be able to repair it, in most cases, as well as any carpenter. In a few years one becomes so expert in the use of tools, that he feels able to go out to work to help his neighbors erect their houses or out-buildings, or to put up his own where no very nice work is required.

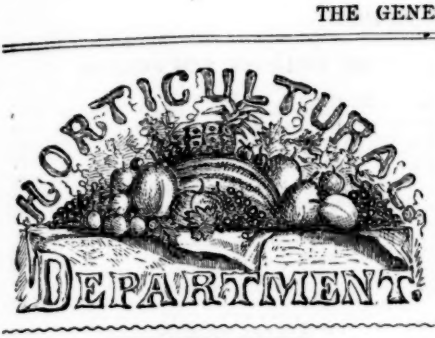
Next to an education at school, every farmer should instruct his sons in the use of tools; and no one will ever say that it was time spent in vain.

Clinton, N. Y. T. B. MINER.

TEST OF THE VALUE OF MANURE.—Hon. JOSIAH QUINCY, Jr., at the first Legislative Agricultural Meeting in Boston, remarking on cow manure, said the test of the value of her products, as well with manure as with milk, was *the quality of the food given her*. This is what we have always contended. "You can get nothing out of her," he well remarked, "which you do not put in. An Englishman will buy a bullock, keep him for a time for his manure, and then sell him for what he gave, or less. Mr. LAWES, of England, had made experiments in feeding cattle on cotton seed meal, and found that while a given quantity of voidings from the food was worth $27,86, the same quantity produced from carrots and turnips was worth only 86 cents."

Neither of the above statements are strictly true. An English farmer does not buy a bullock and sell him, after feeding him for several months, at the price he gave for him or less. Such a statement is obviously erroneous. Again, a *given quantity* of manure made from the foods mentioned does not differ so much in value. What Mr. QUINCY means—and probably said—is that the manure from a ton of cotton-seed meal is worth $27,86, while that from a ton of turnips is worth only 86 cents.

FROM all portions of the great West, intelligence brings favorable accounts of the growing wheat crop; and it is stated as a general fact that, at this season of the year, appearances for an abundant harvest were never more promising.



THE ASTER FAMILY.

No class of flowers can compare with the Aster for autumn flowering, and we depend upon it for our principal garden adornment during the fall. Fortunately it is of easy culture, perfectly hardy, and will thrive in any fair garden soil, and with ordinary treatment. No class of flowers has been improved so much within the last twenty years as this splendid genus, and none has advanced so rapidly in public favor. They are now as double as the chrysanthemum, or the finest dahlia, and almost as large and showy as the peony. Some of our readers, perhaps, who have been acquainted with only the old common sorts will be surprised at this statement, but we can assure them that a perfectly double aster more than four inches in diameter is no strange thing to those who are careful to obtain seeds of the new and choice varieties, and who afterward give them good culture. We give a brief description of a few of the best sorts, and also an engraving of a plant in flower.

Dwarf Pyramidal Bouquet.—This variety well deserves its name, for the flowers are fine and perfect, and so numerous that the plant, when in blossom, has the appearance of a bouquet of flowers, the green leaves only just peeping through, as flowers and leaves are arranged in a bouquet by a tasteful florist. The usual height is about one foot.

Peony Flowered.—A large, showy and beautiful flower. The petals are incurved, giving the blooms a globular form. Like the preceding, they present almost every variety of color. Plants from eighteen inches to two feet in height.

New Chrysanthemum Flowered.—This is a new and very desirable variety. The plants only grow about ten inches in height. The flowers are as large as Peony Flowered, and so numerous as to conceal the leaves entirely.

Imbrique Pompone.—Flowers rather small, round, the petals finely imbricated.

New Crown or Two Colored.—This is one of the most delicate and beautiful of Asters. Each flower is of two distinct colors, a few of the outside rows of petals being carmine, scarlet, violet, or blue, and the center a clear, transparent white.

Large Rose Flowered, or La Superb.—This is a splendid variety, very large, of good form, and of the purest and brightest rose color. Flowers over four inches in diameter.

New Giant Emperor.—This is the giant of the Asters—often five inches in diameter. The plants are peculiar in their habit, as exhibited in the engraving, erect, with no side branches or blooms, and having usually five flowers, all of the same height. The old Emperor was only of one color—a dull lilac—but we now have fifteen different colors of the Giant Emperor. The following description of this splendid flower is by Henderson, the celebrated florist of London: "The Giant Emperor Asters are the most splendid flowers in Asters yet offered, whether regarded for effect, individual beauty, or competition. The well known lavender blue variety, introduced in 1858, is the model of the present section in each of the kinds now referred to, and which offer a complement of colors equal to a magnificent display of this favorite summer and autumn flower. The blossoms in each variety are of great size, double to the center, and of an even circular outline. Their corymbose style of growth produces similar table like clusters of flowers, and consequently show a greater expanse of bloom than any other section

GIANT EMPEROR ASTER PLANT IN FLOWER.

of the asters. The Giant Emperor is also admirably adapted for pot culture, but for medium or large beds, either in miscellaneous mixed colors, or in their respective harmonized tints by separate groups, it is incomparably the finest variety, whether individually or collectively considered, in its adaptation to the well furnished design of a villa garden, or the more extensive requirements attached to larger domains, in their broad acres of flowers, and massive belts of bloom for the late summer months."

The above will make a superb collection of varieties of this beautiful flower.

A METHOD OF UTILIZING SUBTERRANEAN FIRES.

M. NAUDIN, of the *Revue Horticole*, who has written a pamphlet on geothermal culture, mentions in one of the late numbers of that periodical, several instances of the successful use of natural subterranean fires. A correspondent from Wisserling says that this method of culture has been followed for many years in a village of Prussian Silesia, where the inhabitants take advantage of the spontaneous combustion of a coal mine to grow in the open air pineapples, remarkable for their perfection, and which are sent to the Vienna, Paris and London markets.

The establishment of Dr. E. A. GEITNER, a well-known chemist, at Planitz, near Zwickan, in Saxony, from its extent and successful operation, deserves something more than a passing notice. The land which now forms Dr. GEITNER'S garden, was twenty years ago remarkable for its apparent infertility, yet in winter it was covered with a rich green turf, which formed a striking contrast to the surrounding fields white with snow. This phenomenon was caused by warm vapors which went out from numerous fissures in the earth, and which were caused by the burning of a thick seam of coal, situated sixty-five yards below the surface. This conflagration has endured from time immemorial—it goes back at least to the fifteenth century. At present it occupies a space four hundred yards in length and one hundred and twenty yards in width.

No one had thought of making this heat useful until Dr. GEITNER conceived the idea a few years since. After purchasing the land, he had a hot house erected, and under the borders in which he planted pine-apples, he conveyed the heated vapors from the crevices of the earth by means of conductors of mason work. Other plants were put in pots and arranged in the ordinary way. The experiment proved a complete success. A few years later the establishment passed into the hands of a son of Dr. GEITNER, a passionate horticultural amateur. Now it is composed of two conservatories and green-houses, besides a multitude of aquariums, or glazed basins, heated, and filled with aquatic plants. The Palm house is the king of the whole collection. No garden in the world, perhaps, has so many species of palms. And the various hot-houses which derive heat from the depths of the earth contain a collection very nearly complete, of every variety of exotic plant cultivated in Europe. This seems to be a very excellent proof that geothermal culture may be made very successful. Of course it would not be best to set fire to a coal mine in order to provide means of heating green-houses, but the possessors of ground warmed in that manner, may regard themselves as very fortunate

The atmosphere which rests upon this heated earth must necessarily be very much elevated in temperature, but still be cooler than the earth itself, and this is the new principle which is involved in the theory of geothermal culture, the heat being produced by means of proper apparatus.

A LARGE PEAR.—A pear grown in California last season, and sent to the Secretary of the Kentucky Horticultural Society, weighed 2¼ lbs.

THE APPLES OF NEW ENGLAND.

The apples of New England!
How hang their loaded boughs,
Over the grey stone fences
In reach of the dappled cows;
Oh! every red cheeked Baldwin
Hath a merry song to sing
Of some old moss roofed cottage
Where the farmer is a king.

Yes, king of his bursting acres,*
Whose grain takes a thousand hues
In the wonder-tinted sunshine—
Yes, king in his cobbled shoes;
King of the sturdy plow share;
King of the sickle keen;
King over God's full meadows,
Budding in white and green.

The Russets of New England!
What ruddy fires they see,
Where the crack of the veiny walnut
And the crack of the pine agree;
Where the herbs hang high in the chimney,
And the cat purrs on the hearth,
And the rollicking boys guess riddles,
With many a shout of mirth.

Oh! the Greenings of New England!
Of the old Rhode Island stock—
Brought from the English gardens
To grace the land of rock;
As fair as Britain's daughters,
As hardy as her men;
But fairer lads and lasses
Have plucked their fruit since then.

Oh! the Pearmain of New England!
With its blended milk and rose,
There's a smell of Albion's orchards
Wherever the good tree grows;
A stout old Pilgrim* brought it,
And to cradle its seed he broke
The sacred soil of Hartford,
By the roots of the Charter Oak.

Oh! the Pippins of New England!
What lover's smiles they see,
When their yellow coats in letters
Tell tales at the apple-bee;
What rosy cheeks at quiltings!
What kisses in husking time!
That soon lead off to the parson,
Or end in a wedding chime.

Oh! the apples of New England!
They are famous in every land!
And they sleep in silver baskets,
Or blush in a jewelled hand;
They swell in delicious dreaming
On a beautiful, crimson lip,
And taste of the nectared blisses
No lover has dared to sip.

They go to the southern islands,
They go to the western wild,
And they tell of their glorious birth-place,
To every frolicking child;
Of the home where men are noble,
And woman as good as fair;
Oh! the apples of New England,
They are welcome everywhere!

MRS. M. A. DENNISON.

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*Governor GEORGE WYLLYS, of the old "Wyllys place" in Hartford, since made famous as the grounds where grew the Charter Oak. WYLLYS brought that Pearmain tree from England in 1638—*two hundred and twenty-three years ago*, or nearly back to the time of SHAKESPEARE—*and the original tree itself is yet standing* on the spot where the old Pilgrim planted it, a little way south of the house. The new streets, and other "improvements" in those historic grounds, have spared the Wyllys Pearmain Tree, which still flourishes at the green old age of nearly two and a half centuries, and still bears its annual fruit. It is doubtless the oldest known apple tree in America, and one of the three oldest fruit trees—the Stuyvesant Pear Tree in New York, and another in Salem, Mass., being about as old. New branches have sprung from the falling old trunk, and these bear fruit. Probably no other spot of ground in the world can boast of two such historic trees as these which together grew green on each succeeding spring, for more than two centuries.

STRAWBERRY CONVENTION.

WHAT STRAWBERRY IS THE BEST?

One of your correspondents asks the above question. It is easier to answer than to satisfy the many querists that we are right; for there are so many things to be taken into account, that a berry suited to one person's wants and soil, would be unsuited to another's. To one who raises for market, it is essential to select such a variety as will yield a surplus of one hundred or more per cent. on its cost of cultivation. To the amateur, the cost is not so much an object as the size, beauty and flavor of the berry. At this time, when over one hundred different varieties of strawberries are grown under distinct names, each one of which has its claimant for superiority, the difficulty of selection is more than at first supposed; for when we have named *Triomphe de Gand*, because of its size, beauty and delicious flavor,

WILSON'S ALBANY

steps in, and says, "Pooh! I produce two quarts of berries to that lady's one; and if my berries are not quite so highly polished, or so sweet, yet they sell nearly as well, and the quantity is so much greater that my owner is fully satisfied of my value." Now, up jumps

HOOKER'S SEEDLING:

"And may it please you, my good friends, who have just spoken, have told but the truth; and all very well, I presume, for the kind of society with which they have to deal; but I belong to a higher grade, and although I can not endure jolting rides, yet when I am carefully gathered and placed upon the tables of the judges, I find everybody calls on me again and again, and each time with such a peculiar twinge of the mouth, that I am led to believe they appreciate my delicacy above all others. Again, I am not niggardly in yielding; to those who care well for me, I am bounteous in return; but I can not bear neglect in my body."

THE "DOWNER"

here steps forward, and says: "Although originating in a State where now there is more or less of disloyalty, I am true to all the interests of the North; require no petting or extra care to keep me fresh and vigorous, and am disposed to yield a large and bright fruit, of a fine flavor, not quite equal to my friends, *Triomphe de Gand*, or the last speaker, but so firm that transportation, even over long distances, does not injure my looks. My numbers, also, are nearly as great as my friend 'Wilson.'" As the "Downer" sits down,

LONGWORTH'S PROLIFIC.

rises and addresses the meeting much as follows: "Although not having received the hundred dollar premium by a noted society of pomologists, yet I may say without egotism that it is conceded by all who have had my acquaintance two or more years, that to me, rather than *McAvoy's Superior*, should the award have been given; for I am not so easily affected by changes of climate. I produce more berries, and they are equally as large and of as good color; and although they are not quite as delicate and aromatic, yet their firmness and sprightliness are such that I am generally preferred when berries are sought to be grown for market, or for the purpose of sugaring for dessert. Again, I find myself much liked for canning."

JENNY LIND,

not the singer, but the strawberry with that world-renowned name, next modestly remarks that "she could not boast especially of size, modesty, if nought else, would forbid; yet she could claim, with all due deference, that she is an early riser, and for early maturity and productiveness few can excel her; and her firmness and sprightliness are qualities she had never heard controverted. She felt, therefore, that although she did not wish especially to press the matter, yet any gentleman would find his domestic garden sadly deficient without her presence."

THE OLD EARLY SCARLET

here popped up in high dudgeon. "She had been for many years the first to show her ruddy cheek at the season people began to look for the visits of strawberries, and now to have her claims disputed by a foreign named lady, was too bad; although she must in justice acknowledge that lady had not overrated her merits. She, however, desired her listeners to think twice before leaving her behind. They would find her berries abundant and of delicious flavor, although she could not boast of size; but she had always performed two offices, viz.: that of bearing her own burden, and at the same time assisted Mistress *Hovey*, and others of her class, to perfect their works." As the "Early Scarlet" concluded,

HOVEY'S SEEDLING

arose and said, "She had now been over twenty years before the public, and although she had almost invariably reigned supreme at all exhibitions, and generally was ranked highest on the market grounds, yet she had the effrontery to say she was unwilling to yield the chaplet of honor to any of those with whom she was acquainted, and her list of acquaintances counted up something over one hundred names. She would say that for sprightliness some of her rivals outshone her, while others had more aromatic delicacy; but when all the qualities were combined that were requisite to form a good strawberry, she thought ere any one discarded her, they would look the matter over very carefully. She said she loved good care and good feed, as who should not; but no one ever yet complained of her when they had treated her liberally to such items as strawberries ought always to have."

THE PYRAMIDAL CHILIAN

here begged leave to remark, that "she noticed a great many of her associates standing with open mouths, ready to speak, and as she knew they could not all have time to tell their neighbors' faults, much less get through with their own praises, she would move an adjournment; but before all had gone, she should say it was her character to be a little retiring; and while her associates were ruddy with fruit, she only exhibited her blossoms; but after her friends had exhausted their stores, she exerted herself, and she believed with great success, to prevent too great a depression among their lovers, by supplying their wants until some other variety of fruit came naturally into use."

TROLLOPE'S VICTORIA

here jumped up, and said that "before the meeting adjourned, she would like to ask some friend to grow her along side of *Methven Scarlet* another season, and report how far she excelled that once highly reputed berry."

The *Western Queen*, *Fillmore*, *Bartlett*, *Dunder*, and many others whose names are prominent before the world, each and all attempted to speak, but the Editor of the *Farmer* remarked that his printer was calling for copy, and they must excuse him from reporting any further remarks this week, but if his correspondent was not satisfied with what had now been said, he would, at a future time, listen to and print the modest laudations of all the others.—E., *in Ohio Farmer*.

The Profits of Fruit Growing.—The Rochester *Union* says: "There is no question but that fruit growing has been a source of great profit to farmers of Western New York within the past fifteen years, and strange as it may seem, the business improves as the number of growers increases. An instance of the advantage of fruit growing is related by the *Orleans American*. A lady in the town of Gaines bought, eight years ago, eight acres of old, worn out land, at less than $40 per acre, cropped it two years; then in November—six years last November—set it out to orchard, at an expense of less than $200; has cropped it every year since, and realized an annual revenue of over $200, over and above expenses. She recently declined an offer of $2,500 for the field—will not sell for less than $3,000. There is no building or other improvement on the land except those mentioned."

A Prolific Pear Tree.—The *Boston Cultivator* says: "W. R. Preston, of Portsmouth, N. H., has a pear tree that for eight successive years has bloomed and fruited three times a year. On October last, a pear of the first weighed 14 ozs., the 2d 4 ozs., the 3d 1 oz.

ROSES.

WELL, what can be said, new, about roses? Nothing, reader; and, therefore, in the outset we disclaim any pretensions to novelty in presenting these remarks to your notice. The rose has been handled by writers of every grade, in all times, and every part dissected and analyzed. One talks of its leaves, and another of its petals, its buds, its flowers in every stage of development, and praises have even been sung to its thorns. But the subject is always new. "As sweet as a rose," "as beautiful as a rose," "as perfect as a rose," are continually falling upon our ears, and convey to our minds the highest images of perfection the imagination is able to conceive.

LION DES COMBATS ROSE.

The rose bud is particularly admired; the whole class of moss roses is cultivated especially for the buds; but a rose bud of any kind is beautiful. We know little of the mathematical properties of HOGARTH's "line of beauty;" but if it does not exist in a perfect rose bud, we fear that the great artist has made some fatal error. Beautiful as the wild rose bud is just as it has come to us from its Maker, its beauty is yet excelled by the gentle, nursing care of art. This whole great natural order, Rosaceæ, would seem to have been created expressly for the encouragement of horticulture. Nearly every member of it has habits so pliable as to enable it to be moulded almost at the pleasure of the human will; and in this family of plants horticulture has achieved her most brilliant triumphs. Contrast, for example, the "best" apples and pears of our orchards with the wild crab and the choke pear, and the cherry, the plum, the peach, the apricot, and the nectarine, with their representatives in a state of nature, or yet a full blown La Reine, Geant des b ttailles, or Gen. Jacqueminot, with its little wilding relative, pretty, but so poor, beside its rich and high bred cousin, as almost to make one's heart groan with pity.

The bud, no less than the flower and the fruit, changes its form under culture; and thus, instead of one, it exhibits an endless variety of shapes. This change takes place especially in the sepals of the calyx, which are expanded into an infinite variety of beautiful forms. The sepals, in some cases, assume the form of perfect leaves, and from this extreme of development, they vary through every conceivable degree to the simple sepal. To describe these ever changing forms would be impossible, and we can give no better idea of the effect they produce, than by referring to the annexed engravings.

The beauty of this leafy calyx is not even confined to the bud, for when the flower is full blown, it forms a rich green back ground, coming up to the flower closer than the leaves, and by contrast greatly enhancing the effect of the whole.

Leafy calyxes are found in many varieties of the hybrid perpetuals, and of such that exhibit this peculiarity we shall particularize only a few sorts first rate in every respect.

Besides Lion des Combats and Gen. De Brea, shown here, we will mention Marquis de Bocella, Olivier de Serres, Comte de Derby, Gen. Jacqueminot, Caroline de Sausal, Poniatowski, Charles Boissiere, and Duchess of Sutherland.

In connection with this subject, we here take occasion to specify a few more varieties of the best hybrid perpetual roses, which should be found in every good collection:

Adele Meange—A large, full, double rose, rose color, tinged with lilac; it blooms in clusters in great profusion, and is a very desirable sort.

Augustie Mie—One of the best; bright rosy scarlet, large and full, vigorous habit, and profuse bloomer.

Baron Prevost—An indispensable sort; very large and double; a very strong grower, and great bloomer.

Caroline Langelier—A dwarf-growing sort; flowers large and double, bright lively crimson chateaubriand; valuable for its peculiarly soft, delicate rose color; its flowers are best when half expanded.

Dr. Amal—A dwarf-grower; flowers medium size, very bright crimson, almost equal in color to Geant des battailles, but more vigorous than that variety.

Dr. Marx—Very large and full; rosy carmine; a vigorous grower and great bloomer, and altogether one of the best.

Edward Jesse—A large, full and beautiful rose; very vigorous grower and free bloomer.

Geant des Battailles—No rose has ever been more popular in this country than this, and it well deserves its fame; it is of medium size, but quite double, of a bright, glowing crimson, almost dazzling; a very free bloomer, and good grower.

La Reine—Very large, double, rosy lilac; splendid; a vigorous grower, and free bloomer.

L'Enfant du Mont Carmel—A very robust and strong grower, and the most profuse bloomer known; very large and double; deep purplish red.

Lord Raglan—This is the most brilliant crimson of all roses, and leaves little more to be hoped for in point of color; the plant is moderately vigorous, but appears to be a comparatively shy bloomer; a single flower of it, however, is worth a season's culture.

Madam Laffay—Bright, rosy crimson; large and double; a strong grower, and free bloomer.

Mrs. Elliott—Very large and double; rosy purple; a strong grower, and one of the most profuse bloomers.

Pius IX.—Very large and full; bright, purplish red; a very vigorous grower, and free bloomer.

Lidonie—Large and full; blush rose dwarf habit; vigorous and profuse bloomer; if profusion of bloom can be in excess, it is so in this variety, and in L'Enfant du Mont Carmel.

Souvenir de Levison Gower—Very large and full; bright shaded crimson; a strong grower, and free bloomer.

Wm. Jesse—Large and double; bright, rosy crimson; vigorous habit, and free bloomer.

GENERAL DE BREA ROSE.

OSAGE ORANGE HEDGE A FAILURE, AND WHY.

In traveling a distance of sixty miles, recently, I noticed some twenty-five or thirty attempts at raising Osage hedges: all but two, judging from appearances, have been already, or soon will be abandoned as failures. Two, with the addition of an occasional stake in the more open places, are considered a sufficient barrier to turn stock, and those are quite narrow and thin at the base, but much broader and thicker at the top; in fact, wrong end up as regards form, in the opinion of those competent to judge in such cases. In attempting to grow an Osage Orange hedge, two points of the greatest importance are almost always overlooked, viz.: thorough cultivation and proper pruning. I look upon hedging the same as on any other branch of business; to be successful, you must be thorough, and unless you are, you may as well give up first as last. Cultivate and prune properly, and if you don't get a fence in three or four years that suits, don't give up, but persevere one, two, or three years longer, as may be necessary, and if you commence aright, you will have a fence that is just the thing, both useful and ornamental—that will stop man or beast. Now, don't go and stick your hedge down on the north side of, and within less than a foot of a boarded fence, as I have seen in more than one instance, nor close to any other fence, but give it plenty of room. What would you think of a man that wished to fat a bullock, and instead of feeding it eight or ten quarts of meal a day for five or six months, as many of our cattle feeders do, would give three or four quarts a day for about half that time, and because it did not get fat and sleek, would turn out, quit feeding, and condemn the whole system? Yet it is just so with nineteen-twentieths who attempt to grow Osage hedges. Instead of cultivating a strip of land eight or ten feet wide, for five or six years, as they should, they about half cultivate a strip three or four feet wide, two or three years, and perhaps do not prune at all, and because it does not make a substantial fence in that time, they look upon it all as moonshine, only fit for amateurs to bother their brains with. Is it to be wondered at, that with them hedging is a failure?—R. F. Bingham, *in Ohio Farmer.*

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

Contributed to the Genesee Farmer.

To Restore Black Crape Veils.—Hold the crape over boiling water until it becomes damp with the steam, and then pin it down evenly upon a carpet, and it will become stiff, and when dry, will have the appearance of new crape.

Frozen Eggs.—Mrs. Sophia Damon says that frozen eggs can be restored, by putting them into cold water, and placing them on the stove, where they will warm gradually. If used immediately, will be as good as any eggs.

Pulverized Borax.—A lady correspondent says she wishes to recommend this article as invaluable for a lady's toilette. It is an excellent dentifrice; it removes all stains from the hands; it cleanses the hair from dandruff, and is particularly good for washing muslins and laces.

Cyanide of Potassium.—This article will be found infallible in removing stains from any kind of white cloth. A distinguished chemist in the city of New York says that he has never found any stains that can not be removed by its application. Cover a small quantity of it with tepid water, and apply it to the stain immediately. It will even remove indelible ink.

Soyer, the great French cook, says that cookery has been thought beneath the attention of men of science; and yet, was there ever a political, commercial, or even a domestic event, but what always has been, and always will be celebrated either by a banquet or a dinner? Nothing, he says, more disposes the heart to amicable feeling and friendly transactions, than a dinner well conceived and artistically prepared. In ancient times, a cook, especially if a man, was looked upon as a distinguished member of society; and there are a few still in the high circles who highly appreciate the knowledge he possesses, and have classified cookery as a high art. One of the greatest chemists of the day (Liebig) pays the highest eulogium to culinary science. Soyer considers it worthy the attention of a peer of the realm, and that the morals of the country greatly depend on the production and preparation of its food. If this be so, it is surely worthy the attention of the women of this country who are housekeepers, to make it a matter of the deepest interest to attend to the preparation of food for their families. It is said of many who have resided for a time or traveled in France, that a real French dinner, consisting often of seven courses, is so perfectly prepared and seasoned, and such an adaptation in its variety to the digestive organs, that no one would feel that he had eat too much, although he had taken something from each course, and that the most inveterate dyspeptic could eat a French dinner with impunity. If culinary science can be carried to such perfection, surely cookery *should* be ranked among the fine arts.

"To be pleased with one's self, is the surest way of offending everybody else."

Fashions for Ladies' Dress.—The present fashion for ladies' dress is really sensible. The high, thick boots, linsey-woolsey dresses and grey sacques for the streets, which are now in vogue among fashionable city ladies, are just what is needed in the country. The ladies are now adopting the habits of street dress of high-bred English ladies, and a great improvement it is upon the customs in this country for many years. Now, ladies who dress fashionably are warmly clad when exposed to the weather, instead of the flaunting, showy style formerly worn by young ladies, when they could never be warm, unless, as their mothers would say, "Pride kept them warm."

The latest Paris fashions for bonnets for full dress are rose color, or blue uncut velvet, trimmed on the top of the front with flowers or feathers of the same color. The front is quite large and high at the top, but very close and snug at the sides of the face. The strings of the same color with the hat, broad and long, and tied with quite large, prominent bows under the chin.

A veil composed of both black and white blonde lace is much worn, and particularly admired.

The fashions for dresses remain almost unchanged. Grave colors are worn for fashionable visits, even by young ladies; and the principal charm of the present fashion is, that each lady can adopt the mode of dress most fitted to her style of face or figure, and still be dressed fashionably—for every style is worn.

Zouave jackets and short sacques, pointed waists, and waists with belts and clasps, high-necked waists for wedding dresses, and low-necked for young ladies. Black silk and velvet wadded sacques are much worn again, and short, circular cloaks, trimmed with a broad flounce.

Washington Irving on Woman's Love.—"It is a common theory to laugh at all love stories, and to treat the tales of romantic passion as mere fictions of poets and novelists, that never existed in real life. My observations on human nature have convinced me of the contrary, and have satisfied me that, however the surface of the character may be chilled and frozen by the cares of the world and the pleasures of society, still there is a warm current of affection running through the depths of the coldest heart, that prevents its being congealed. Indeed, I am a true believer in the blind deity, and go to the full extent of his doctrine. Shall I confess it? I believe in broken hearts, and the possibility of dying of disappointed love! I do not, however, consider it a malady often fatal to my own sex, but I firmly believe it withers down many a lovely woman into an early grave. Man is the creature of interest and ambition. His nature leads him forth into the struggle and battle of the world. Love is but an embellishment of his early life, or a song piped in the intervals of the acts. But a woman's whole life is a history of the affections. The heart is her world; she embarks her whole soul in the traffic of affection; and if shipwrecked, her case is hopeless, for it is a bankruptcy of the heart."

"Expect no constancy from fickle Fortune, for the ancient dame has been the wife of many a thousand bridegrooms."

Miscellaneous.

DESCENT OF THE EAGLE.—In *Forest Creatures*, by CHAS. BONNER, we have an account of the remarkable power possessed by the eagle of instantaneously arresting himself while dropping through the air at a certain spot, with folded wings, even when descending from a height of 3,000 or 4,000 feet. "When circling so high up that he shows but as a dot, he will suddenly close both wings, and, falling like an aerolite, pass through the intervening space in a few seconds of time. With a burst, his broad pinions are again unfolded; his downward progress is arrested, and he sweeps away horizontally, smoothly, and without effort. He has been seen to do this when carrying a sheep of twenty-six pounds weight in his talons; and from so giddy a height that both the eagle and his booty were not larger than a sparrow. It was directly over a wall of rock in which the eyrie was built; and while the speck in the clouds was being examined, and doubts entertained as to the possibility of its being the eagle, down he came headlong, every instant increasing in size, when, in passing the precipice, out flew his mighty wings; the sheep was flung into the nest, and on the magnificent creature moved, calmly and unflurried, as a bark sails gently down the stream of a river."

AN ELEPHANTINE ACTOR.—Sir EMERSON TENNET, in his Natural History of Ceylon, says the elephant occasionally feigns death in order to regain his freedom. Of a recent captive he writes: "It was led from the corral as usual between two tame ones, and had already proceeded far towards its destination, when, night closing in, and the torches being lighted, it refused to go on, and finally sank to the ground apparently lifeless. Mr. CRIPPS ordered the fastenings to be removed from its legs, and when all attempts to raise it had failed, so convinced was he that it was dead, that he ordered the ropes to be taken off and the carcass abandoned. While this was being done, he and [a] gentleman by whom he was accompanied leaned against the body to rest. They had scarcely taken their departure and proceeded a few yards, when to their astonishment the elephant rose with the utmost alacrity, and fled towards the jungle, screaming at the top of its voice, its cries being audible long after it had disappeared in the shades of the forest."

PAT'S READY WIT.—A traveler in Ireland having been inclined to deny that the peasantry were humorous, was told to ask any question of the first laboring man he met on the road. Accordingly, on seeing a sturdy fellow breaking stones, he says, "Now, my man, if the devil were to come here just now, whether would he take you or me?" "Me, to be sure," says the man, "for he's certain of your honor at any time."

A DISTINGUISHED character once called on Sir EARDLY WILMOT, and related to him the particulars of a serious injury he had received from a person high in the political world. When he had told his story, he asked WILMOT if it would not be *manly* to resent the injury. "Yes, Sir," said the Judge; "it would be *manly* to *resent* it; but it would be *God-like* to *forgive* it."

SOCIETY FOR THE PREVENTION OF CRUELTY TO HUSBANDS.—In cold winter, when a horse's bit is full of frost, never put it (we are told) into his mouth without previously warming it. You should not treat your husband with less kindness than you would your horse. Therefore, during the winter, put none but warm bits into the dear creature's mouth. Not to do so is very cruel, as it is very well known that the husband's mouth is much more sensitive in cold weather than at any other period of the year. It only makes him restless, snappish, and spoils his temper, so much so that it is almost dangerous at times to go near him. Hence, whatever you do, avoid cold mutton.—*Punch.*

GOOD FOR EVERYBODY.—Marryin' is a good thing, it is a grate thing, as Aunt Jane ses; a grate institusbion (how she noes I can not tell, for she never had a chance to try;) it's good for everybody. Are you old?—marry, it'll make you young (or you'll die trying to 'pear so.) Are you young?—it'll make you old. In fact, it is sooted to ev'ry and ennybody. It's a briar-rose hedge that society has set up to keep folks inside the bounds uv good behavior; and tho' I've had ups and downs in it, and no all about it, still, I say, hooray for marryin'! It's good for everybody.

THE Duke of NORFOLK had a fancy for owls, of which he kept several. He called one, from its resemblance to the Chancellor, "Lord Thurlow." The Duke's Solicitor was once in conversation with his Grace, when, to his surprise, the owl-keeper came up and said, "Please you, my Lord, 'Lord Thurlow's' laid an egg."

A FAMILIAR ILLUSTRATION.—A medical student, under examination, being asked the different effects of heat and cold, replied: "Heat expands, and cold contracts." "Quite right; can you give an example?" "Yes, Sir. In summer, which is hot, the days are longer; but in winter, which is cold, the days are shorter."

A CELEBRATED barrister, retired from practice, was one day asked his sincere opinion of the law. "Why, the fact is," rejoined he, "if any man was to claim the coat upon my back, and threaten my refusal with a law-suit, he should certainly have it—lest, in defending my coat, I should lose my waistcoat also."

A NICE DISTINCTION.—Rev. T. STARR KING, an Universalist preacher to an Unitarian congregation, lately defined the difference between the two bodies to be this: "The Universalists hold that God is too good to damn them; and the Unitarians hold that they are too good to be damned by Him."

NOTHING LIKE TRYING.—FREDERICK the Great asked an Englishman whether one hundred of English guardsmen could beat the same number of Prussian. "Upon my word, I don't know," said the Englishman; "but fifty would try!"

CAUGHT A TARTER.—Young Snobby insulted a "Friend" one day by accosting him thus: "Well, Broadbrim, are you much of a *Shaker?*" "Nay, not much; but I can do a little in that way." So he seized Snobby by the collar, and nearly shook him out of his boots.

CONTENTS OF THIS NUMBER.

Cultivation of the Beet for Sugar,... 73
Coffee in Illinois Where England gets her Timber,... 74
Rats—How to Destroy them,... 74
Digging Potatoes, again. Good Cows,... 75
Spirit of the Agricultural Press,... 76
  Fat Cow. Barn-yards and Manure,... 75
  Prolificness of Sows,... 76
  Underdraining. Good Hogs,... 77
  Harnessing Arrangement. Leached Ashes,... 77
  Cutting off the Tops to Prevent Potato Rot,... 77
  Warts on Cattle. Cabbages every Year,... 77
  Sowing Peas,... 77
  Yorkshire Pigs. Sorrel and other Weeds,... 78
  Top-Dressing Grass-Lands in the Spring,... 78
Management of Honey Bees,... 79
The Carrot—Its Value, Productiveness, etc.,... 80
Horses and the War,... 81
Mysteries of the Poultry Yard,... 82
Rye to bring Light Soils into Condition to Produce Wheat,... 83
A Useful Implement,... 84
Cultivation and Use of Willows,... 85
Making Maple Sugar,... 86
The Old and New Order of Farming in England,... 86
Hungarian Grass,... 87
Why does she Kick the Milk over?... 88
Mechanical Tools for Farmers,... 88
Test of the Value of Manure,... 88

HORTICULTURAL DEPARTMENT.

The Aster Family,... 89
A Method of Utilizing Subterranean Fires. A large Pear,... 90
The Apples of New England,... 90
Strawberry Convention. Profits of Fruit Growing,... 91
A Prolific Pear Tree,... 91
Roses,... 92
Osage Orange Hedge a Failure, and why,... 93

LADIES' DEPARTMENT.

Original Domestic Receipts,... 94
Fashions for Ladies' Dress,... 94
Washington Irving on Woman's Love,... 94

MISCELLANEOUS.

Descent of the Eagle. Elephantine Actor. Pat's Ready Wit,... 95
Society for the Prevention of Cruelty to Husbands,... 95
Good for Everybody. A Familiar Illustration, etc.,... 95

EDITOR'S TABLE.

Notes on the Weather,... 96
Agricultural Items,... 97
The Markets,... 97
Items, Notices, &c.,... 96, 97, 98, 99
Inquiries and Answers,... 99

ILLUSTRATIONS.

Side-hill Barn with Sheds,... 76
Giant Emperor Aster Plant in full Flower,... 89
Lion des Combats Rose,... 92
General de Brea Rose,... 93

To Our Friends.—On the last page of this number of the *Genesee Farmer* will be found a remarkable list of Premiums to all who send us the names of subscribers, old or new, for this year, Never were more liberal Premiums offered. These Premiums are offered to *all*. There is not one of our readers who can not send us from one to a dozen subscribers, by simply speaking to their friends and neighbors, and asking them to subscribe. The *Farmer* is so cheap that no one can object to take it on account of the hard times. The back numbers from January will be sent in all cases.

Notes on the Weather from January 15th to February 15th, 1862.—The weather continued pleasant to the end of January. The snow, hail and rain of the 15th prepared us for good sleighing on the 16th, which continued through the last half. For snow fell often in small quantity so as to compensate for a little melting and much wearing out of paths.

The temperature of the last half exceeds the average, by near 2°, being 26.5°; and of the whole month was nearly one degree below the average, being 24.7°. The lowest was *one* degree on January 5, and 6° on the 14th; and the lowest in the last half was 11° on the 16th and 27th, while 41° was the highest on the 29th, and the highest mean, 38°, was on the same day.

The quantity of water in the month was 3.51 inches.

The great storm of the month began on the 24th on the coast of North Carolina from the N. E., and moved northwards, reaching New York at 9 P. M., and extending its snow and rain and wind over much of the 25th; began at Boston late on the 24th, and gave much snow and rain on the 25th; and began in Belfast, Maine, at 10½ A. M. on the 25th. Of course, the change of wind to the west followed the same regular course, being at New York on the 25th P. M., and extending to the north. The railroads were blocked up by snow on the Hudson, from the Highlands northwards, and over Vermont and west of New England. The storm did not reach west of the Allegany Mountains, in New York, though 3 or 4 inches of snow in the vicinity of Rochester and more further east without any considerable wind. In this storm, the Rev. H. C. O. Dwight, Missionary at Constantinople, and on a visit to this country, was instantly killed by the overturning of the car at 9½ A. M., a few miles north of Bennington, Vt., on its route northwards, by the great violence of the N. E. wind on the 25th. There was a heavy gale on Chesapeake Bay, and along the coast, and the tide was very high in New York on the 25th, as well as at Boston.

At Washington, and on the Potomac, the weather was unpleasant for the month; at Philadelphia also; at New York, and west into New Jersey; but in this vicinity, and even west of this State, the weather has been pleasant as ever, with moderate temperature, and we have on the ground a foot or more of snow and ice.

February has so far been pleasant, slight thawing of snow once or twice, with enough of snow to continue the sleighing very good. Two or three inches of snow fell in the last few days. The highest temperature was 40° on the 6th, and the lowest was 11° on the 14th, 13° on the 2d and 3d and 5th, and only 14° on the 10th and 11th. The good sleighing, with slight drifting, has made both business and pleasure easy. The mean heat was 24.8°, or 1.4° below the average for 25 years. The range of the average for this half of February in a few years, has been from 15.9° in 1856, to 29.1° in 1857. The cold has not yet been down to zero this winter.

A Great Fruit Year.—The winter has been highly favorable for fruit trees in this section. The buds are all safe, and the prospects now are that we shall have a remarkably productive year. The fine weather last fall ripened the wood perfectly; the failure of the fruit last season imparted increased vigor to the trees, and everything is favorable for an immense crop.

AGRICULTURAL ITEMS.—France, Ireland, Italy and Portugal still want grain, and the *Mark Lane Express* says "It will be well if the producing countries of Europe, as well as America, can meet the heavy demands certain to be made."

In the new Museum in Kew Gardens, England, there is a specimen of cotton, 600 hanks, weighing only a pound; spun so fine, they measure more than 500,000 yards, or 250 miles in length.

The last crop of English grown clover seed is of poor quality, and the yield was not good.

A "gentleman of veracity" asserts that he saw a horse's nose frozen in, while drinking at a trough, at Portland, Maine, a few days ago.

The wheat crop in England looks favorable. The plants were never better.

DALLAS, in his *Animal Kingdom*, tells us that he was informed by a Scottish minister that on his first going to his parish in Morayshire, he had seen a cow, a sow, and two young horses yoked together, and drawing a plough in a light, sandy soil, and that the sow was the best drawer of the four.

The Artificial Cattle Foods, which are so extensively advertised in England, are universally denounced by the scientific men. They are worth only about *one-fourth* what is charged for them.

The *Courrier* of Odessa states that that town and the surrounding district have had a general invasion made on them by mice, and the cats have become so fat with the number they have eaten, that they are no longer capable of performing their duty.

M. BOUSSINGAULT, the great experimental farmer and chemist, has been chosen Vice President of the Central Agricultural Society of France.

Great efforts are being made to repeal the hop duty in England.

E. CORNELL, of Tompkins Co., has been elected President of the New York State Agricultural Society, for 1862. A better man could not have been chosen.

RESTORING A WORN OUT FARM.—H. J. COLLINS, Esq., of Collinsville, Ct., writes us that he raised last year 70 bushels of shelled corn per acre, all sound, from land which a few years ago would not keep a cow alive. He *soils* his cattle in summer, and feeds them in winter on steamed corn-stalks, with oil-cake meal, bran, etc. He composts his manure with muck, and saves all the liquid from the house, etc. This system enabled him to keep 30 head of cattle on a farm that formerly would keep only 6 or 8 head. He makes 750 loads of manure a year, and expects soon to make 1,000. He adds: "I take all the best agricultural papers, and the *Genesee Farmer* is a *little* the best one of all. The Albany *Cultivator* comes next, and close on your heels. You will not consider this faint praise." We certainly do not.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1862.—The first edition of the *Rural Annual* is nearly exhausted and we are now printing a second edition. It will be sent prepaid by return mail to any address on receipt of 25 cents. The volumes for 1856, '57, '58, '59, '60, '61, and '62, will be sent prepaid to any address for $1.40, or 20 cents each. There is no cheaper or better work published.

THE MARKETS.—Under the influence of the pacific termination of the "American difficulty," the grain markets of Europe manifested a declining tendency for a few days. The last *Mark Lane Express*, however, says "the wheat trade has partly recovered from the late depression, the average gain in value being about 1s. per quarter" [3 cents per bushel.] This high authority estimates that England will require before next harvest *forty-four million bushels of wheat*. Others estimate it much higher.

Hogs still continue very low, but there is a slight tendency to advance. The price in New York ranges from 4½c. to 5½c. for the dead weight, or from 3 to 4c. live weight.

Hay in New York is in demand for shipment in bales at $15a$17 per ton.

Coarse wool is somewhat lower, while fine maintains its price.

There is little change in the grain market.

At the last cattle market in New York, the supply of beef cattle was light, and prices advanced one cent per lb. A fine Durham white steer, 7 year old, and weighing at home 3,240 lbs., sold for $250. 14 head of Ohio Durhams, estimated at 13 cwt. each, sold for $115 per head. Milch cows are looking up. The range of price is from $30 to $45 for cows with young calves. The veal that is offered in market, the *Tribune* says, "is undoubtedly tender, as they are often killed at two or three days old."

Sheep brings 5a5½c. per lb. live weight.

GAME IN ENGLAND.—An English farmer once told us that the hares destroyed wheat, barley, turnips, and other crops on his farm to the value of $500 per annum. The abundance of game, and the high price it commands, render poaching very common, and to check it as far as possible, it is now proposed to make those who sell game attach a ticket to it stating from whom it was purchased. The *Mark Lane Express* suggests a ticket after the fashion of the Smithfield Club card, that the butcher so carefully carries off with him for display in his shop windows. The sarcasm is admirable:

CLASS I.
FAT HARES OF ANY AGE.

First Prize to the breeder, the *Right Honorable the Earl of Wholesale, of Slaughterers, Bagsheer.*
Fed by *Mr. Veake Time, of the Open House Farm*, upon young wheat, turnips, swedes, carrots, and other roots.
Purchased by *Fur & Feather, of the Market Place, Bagshot.*
COPPER MEDAL TO THE FEEDER.—*Mr. Veake Time.*

SEEDS BY MAIL.—The new law allowing seeds, plants, etc., to be sent by mail at one cent per ounce, affords an excellent opportunity for obtaining choice varieties at cheap rates. Several reliable parties offer valuable seeds in our advertising columns. Our readers may send to them with confidence. If desired, we will attend to any orders for seeds, plants, etc., that our friends need.

BOUND VOLUMES OF THE GENESEE FARMER.—We can furnish any of the back volumes of the *Genesee Farmer* for 1856, '57, '58, '59, '60 and '61, handsomely bound in cloth, at One Dollar, sent prepaid by return mail. The six volumes will be sent by express for $5.00.

WESTERN CORN IN THIS STATE.—Our esteemed correspondent, SAMUEL WILLIAMS, of Waterloo, N. Y., sends us a sample of Dent corn, grown by JOSEPH WRIGHT of that village, and says: "I send you the corn from one of Jos. WRIGHT'S large ears of dent corn; it was 22 rowed, with a red cob; some were 27 rowed, but not as large kernel nor as heavy ears as the sample. If you will procure the largest ear of flint corn grown with you, you will find, as I did, that it weighs, shelled, one-third less than the dent ear, while the cob of flint, 8 or 12 rowed, is still heavier. One peculiarity of the dent corn is the very small stem that holds the ear to the stalk, and the ear is filled around the butt to the stem, while the flint corn has a stem so large that no corn can grow around even the edge of the butt end. There can be no doubt but that with seed fresh from the West, this dent corn will yield one-third more on the same acre than any variety of Northern corn; and it never fails to ripen here if planted early on extra rich drained soil. Hence I consider it a desideratum for every farmer, who has plenty of manure and but little land, to plant this corn. JOSEPH WRIGHT'S seed was from Illinois. J. J. THOMAS measured the corn, and found it from 13 to 15 feet high, and about one-third more corn to the acre than the 8 rowed planted on the same soil.

I planted two rows in my garden, of the same variety, but the seed was grown by WRIGHT last year; it was in drills 4 feet apart, and only 6 inches in the drill; every stalk had one ear, and some two; but the kernel was smaller, and the stalks 2 feet shorter than WRIGHT'S from fresh Illinois seed. Next year I shall plant from WRIGHT'S grown here this season, and shall thin to 8 inches apart, in order to get larger ears, and more with two on a stalk. It bears no suckers; every year was fully ripe by the 1st of October, and every ear full at both ends of the cob, leaving a space of about ¾ of an inch for the stem. I am positive that the yield was over 120 bush. of shelled corn to the acre. You can, after weighing this corn, calculate what the yield would be 4 feet by 8, or say 9 inches apart, counting only one ear to the stalk. WRIGHT cuts all the stalks fine by horse power, and his bright wheat straw is untouched by his stock as long as cut stalks are in the manger. They are cut and stacked as soon as the corn glazes."

DEATH OF PRINCE ALBERT.—In alluding to the death of PRINCE ALBERT, the *Journal of the New York State Agricultural Society* says: "He has held a very important position in the English nation. He was the President elect of the Royal Agricultural Society, and took a very deep interest in the welfare of the Society. The Great Exhibition of 1851 was originated by the Prince, and owed much of its success to him, and he was actively engaged in forwarding the approaching Exhibition for 1862. The Americans who were present at the Exhibition in 1851 will long remember his Highness for his unwearied efforts to have the exhibition in the American division properly brought before the public, and his kind greetings to us after the trial and success of the American reapers, plows, and other implements, when he visited our division with Her Majesty, Queen Victoria, will not be forgotten; and his parting shake of the hand as he left us after the examination, shows that even Princes can appreciate the efforts of others, and can give their aid when most needed to those who have no special claims upon them."

PURE SEEDS.—The importance of sowing clean seed can not be over-estimated. SANFORD ADAMS, of Boston, Mass., has invented a very simple and efficacious machine for the purpose. The *New England Farmer* says:

"We have seen his machines, and found his sifting processes truly wonderful. He has brought them to such perfection, and will furnish the means of doing the same so cheaply, that there is no necessity for the farmer any longer to sow foul seeds, and thus entail upon himself and posterity a perpetual plague and loss.

"What struck us as the most surprising in Mr. ADAMS' apparatus, is the great simplicity with which he accomplishes so much. He not only separates products of different sizes and shapes, but by the application of screws to fan mills, he does so by their specific gravity."

MORE PORK.—I have just returned from a visit to my friends in Schaghticoke and Easton—called at NATHAN G. AKINS', in Schaghticoke, Rensselaer Co., in the afternoon of the 4th of February. He had just finished dressing six hogs. One, two years old, weighed 865 lbs., and five yearlings weighed severally as follows: 767 lbs., 642 lbs., 572 lbs., 538 lbs., 530 lbs. They were fine-boned, of the breed familiarly known with us as the "Wagman" breed, in Saratoga County.

ORREN BEWEL, of Easton, Washington Co., dressed on the 3d inst. six fine-bone pigs, nine months and fourteen days old, which weighed as follows: 412 lbs., 448 lbs., 452 lbs., 419 lbs., 372 lbs., 380 lbs.—ABNER DEVOL, *Gansvoort, N. Y.*

What is Said of the Genesee Farmer and Rural Annual.

NEVER have we received so many encouraging notices of the *Genesee Farmer* and of the *Rural Annual and Horticultural Directory* as during the present year. We give below a sample of the many hundred notices recently received.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1862.—For the last five years we have had occasion to speak of this work, as the successive volumes have been received. All have been good, and the present one, from the glance we have given it, seems not inferior to the preceding. The price is twenty-five cents per copy, which makes it a very cheap source of information.—*Boston Cultivator.*

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY.—Such is the title of a little book published at the commencement of each year by the editor of the *Genesee Farmer*. The volume for 1862 is received. It is a work which can not be too extensively circulated among all interested in rural pursuits. The six previous volumes received very general commendation, and that for 1862 will be found fully equal to any of the series.—*Maine Farmer.*

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY, FOR 1862.—This is the seventh annual publication of this very useful and popular Annual, the high character of which is fully sustained by the present volume. It is, as several of our readers are aware, published by Mr. JOS. HARRIS, at the office of the *Genesee Farmer*, at Rochester, in the State of New York, from whence it can be obtained by mail, by remitting the price, only 25 cents! This small sum will appear extraordinary when it is considered that the work is very neatly printed, and illustrated by numerous wood cuts. Publications of this nature can not fail to ensure a highly beneficial influence on the practice of agriculture, and the minds of all that are in any way engaged in country pursuits.—*Canadian Agriculturist.*

THE GENESEE FARMER.—This excellent and extraordinarily cheap agricultural paper has now obtained a standing of more than *thirty* years, and a circulation surpassing most of the agricultural publications of the present day. The *Genesee Farmer* is truly the "Farmer's own paper," and cannot fail to interest and please, as well as

instruct its numerous readers. No one who has had the privilege of reading the *Farmer* the past two years will be willing to do without it. In fact, he *can not afford to go without it.* Many of the numbers are worth the whole cost of the year's subscription. Published monthly, at Rochester, N. Y., by JOSEPH HARRIS, at 50 cents per annum. Subscribe for it.—*Repository and Hort. Cabinet.*

GENESEE FARMER.—This old and really excellent monthly, has a very large circulation and has always been a general favorite with the public. It is published at Rochester, by JOSEPH HARRIS, and costs only fifty cents a year. If any of our friends want a good paper for a very little money, we advise them to make an investment of fifty cents with Mr. HARRIS. It will pay 100 per cent.—*The Dairy Farmer.*

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1862.—This little volume published by Mr. HARRIS, the well-known edtor of the *Genesee Farmer*, is designed as a hand-book to those engaged in the culture of the soil, whether in the raising of grain or fruit. It will be found to contain much useful information respecting the culture of wheat, rye, barley, oats, and Indian corn; the planting and culture of fruit trees, and especially of dwarf and standard pears; cider-making; culture of grapes; application of manures, and many other practical articles of value to the farmer and the horticulturist. A large number of engravings illustrate these articles, and yet the volume is offered at the small charge of twenty-five cents.—*New York Evangelist.*

THE GENESEE FARMER.—We know of no production which has tended to impart so much agricultural information to its readers as the *Genesee Farmer*. If our sturdy sons of the soil would more generally subscribe to this practical manual, they would find themselves not only more wise and better operatives, but richer men. Every monthly issue develops something new and useful to farmers—and lately the public has been surprised by an excellent work from the *Genesee Farmer* office, which every agriculturist and horticulturist should have upon his table. The cost of the *Genesee Farmer* is nominal. The cost of the *Rural Annual*, containing infinite instruction, (and among other things, the method of wine-making,) is 25 cents.—*Glenwood, Iowa, Times.*

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1862.—We have received this annual, in the form of a duodecimo of one hundred pages, and in relation to it we not hesitate to say *that it contains a greater amount of interesting and instructive matter than any other work of an equal number of pages that we have had before us.* It contains an immense variety of agricultural and horticultural matter, collected with judgment and good taste, and well adapted to the intelligence of all classes of farmers, while it must prove interesting to the general reader. It is in quite a neat cover, and will prove in every way an ornament to the parlor-table of the farmer's homestead. It is published by Mr. HARRIS, editor of the *Genesee Farmer*, Rochester, N. Y., from whom it may be procured, free of postage, by remitting the price, twenty-five cents.—*Evans's Rural Economist.*

THE GENESEE FARMER IN CANADA.—JOHN MCASKIN, of Prescott, C. W., who sent us 102 subscribers for this volume of the *Genesee Farmer*, writes us under date of Feb. 6th, as follows:

"Having received the February No. of your *Farmer*, I have found that Canada has done something large in competition this year, plainly proving that the more your paper becomes circulated, the more it is appreciated and sought after; not on account altogether of its cheapness, but for its sterling merits and genuine usefulness. As I said in my last letter to you, some of the subscribers had never seen nor heard of the paper, and the general impression was in two or three weeks after they signed, that the paper was nothing but a humbug; but when the January number came, it cast all this nonsense in the shade, they having found it to surpass their most sanguine expectations, by treating ably on many subjects of which before they were almost totally ignorant. I think it will be quite easy to raise a pretty large club in this part for next year, on account of its being better known."

Inquiries and Answers.

PEDIGREE WHEAT.—(L. P. STOUGHTON.) We have no seed of this wheat for sale, and do not know where it can be obtained in this country. Mr. HALLETT, the originator, resides at Brighton, England.

ORCHARD GRASS.—(J. CUPPAGE, *Orillia, C. W.*) The specimen of grass you send is the Orchard grass of this country, or the Cocksfoot grass of England (*Dactylis glomerata*). It is a well known and useful grass.

MILKING.—(A Young Milker.) An old milker can get along with a one-legged stool, but one with three legs is better. Do not put the pail on the ground, or stick your head into the flank of the cow. Sit up straight, and close to the cow, and hold the pail between your legs. There is then very little danger of the cow kicking over the milk. After the milk begins to flow freely, do not stop till you are through. Milk steadily, and do not speak a work, except some soothing expressions to the cow. Strip *clean*. This is very important. A poor milker, and one that leaves milk in the udder, will dry up the cow. The strippings are far the richest milk. Ten cows an hour is good work. We have milked six, except stripping, in half an hour, but they were all easy milkers.

SCAB IN SHEEP.—Can some of your experienced correspondents give me a remedy for scab in sheep?—H. A., *Ann Arbor, Mich.*

SWEET POTATOES.—I would be very glad if you or some of the valued contributors to the *Farmer* would write an article on cultivating and preserving sweet potatoes.—YOUNG FARMER, *Kittaning, Pa.*

LIGHTNING RODS.—Will some of the experienced correspondents of the *Farmer* give us some information in regard to lightning rods—their construction, putting up, etc. I am building a new barn, and would like to know if I can ventilate with board box conductors to an opening in the peak of the roof.—W., *Delaware Co., Iowa.*

SOWING CLOVER AND TIMOTHY.—I find trouble in sowing timothy and clover seed by hand. Will you or some brother farmer inform me through the *Genesee Farmer* where I can purchase a machine that will do it up right, and at what cost. Also, information with regard to the quantity of seed per acre, and in what proportion of clover to a gravelly soil? After sowing, would you harrow it or not? Will some practical man give his views, and by so doing oblige—J. H. MCCOLLUM, *Newfane.*

SOD FENCE, ETC.—Can a permanent fence be made to turn farm stock, by placing two parallel rows of blue grass or other sod on the edge, grass side up, filling in with the earth from outside of base, carrying it up conic shape 3 to 3½ feet above the surface—the removing of the earth to fill in forming a ditch 1½ feet deep on each side of base? Will frost or drouth injure the sod in that elevated position?

Also, what is the best mode and season to irrigate meadows? Will some of the readers of the *Genesee Farmer* give their experience?—T. H. P., *Tappan, Ohio.*

DRAIN TILES.—Will some of your correspondents inform me what size of tile I should lay for a main drain to drain twenty acres? There is no spring—only the water that falls on the surface. The soil is a heavy clay, and quite level. Will it do to have an open drain alongside the main covered drain, to carry off the water behind the piece I want to underdrain?

Will three feet be too deep to put the side drains, in a soil so hard that I have to pick it after I get down eighteen inches? Will 33 feet be close enough to put the drains? Is it necessary to put straw on the tiles?—WM. FRASER, *Esquessing, C. W.*

BEANS AND CORN FOR FEEDING SHEEP.—In your February number, B. F. TABER inquires "respecting the relative value of beans to corn for feeding purposes."

Some of our farmers who keep from 200 to 500 fine-wooled sheep, have fed beans to their flocks in past winters. A few days ago, I met with one of these flock masters, and made inquiries respecting the matter. He has just sent me a written statement, the substance of which I here forward:

"MR. BARTLETT:—We have fed 'white beans' to our breeding ewes, 120 in number, to the amount of 50 bush., for each of the two last winters. We consider them worth one-third more by weight than corn for the production of milk.

We first tried them ground; but they can not be cracked without there being a flour produced, which they will not readily eat on account of there being a sticky dough formed by means of the moisture from their mouths. We then soaked them in boiling water for an hour or two, but not long enough to start the skin.

The beans cost, delivered at our depot, $1 per bushel, and were the cheapest feed we have ever used. If we could get them for $1.25 per bushel, we should use them this year; but we can not, therefore shall purchase shorts.

B. W. COUCH & Co."

The Messrs. COUCH keep about 500 superior fine-wooled sheep, and enter into the business with a right good will, and consequently are successful, making money thereby, having just sold their wool at 50 cents per pound, cash on delivery. Corn here is worth 84 cents per bushel, but for their breeding ewes they would prefer beans at $1.25.

You say, Mr. Editor, "we would prefer to grind them;" so thought the Messrs. C.; but for reasons given, they soon abandoned it, finding the soaking process much the best. I am of the opinion that soaked corn, upon trial, would be found far preferable to that of the dry feed for sheep or any other animals.

Judging from the analyses of corn and beans, we should prefer corn for feeding sheep, if fattening them was our object. But for the greatest production of wool, muscle, milk and lambs, we should give beans the preference.

As to the nutritive value of corn and beans, according to some of the most eminent agricultural chemists and writers in Europe, 45 lbs. of beans are equivalent to 50 lbs. of corn.

Mr. LAWES, basing his calculations upon the constituents of a good Peruvian guano, and its commercial value, estimates the value of the manure derived from a ton of beans at about $18, while that derived from a ton of Indian corn to be worth only about $8—a very material difference, and one that should be taken into consideration by the farmer who grains his sheep, whether he raises the feed or purchases it. You, Mr. Editor, in the columns of the *Farmer*, have time and again called the attention of your readers to the importance of growing more largely of leguminous plants—clover, peas, beans, etc.—and if they have not profited by these teachings, you may set them down as incorrigible.—LEVI BARTLETT, *Warner, N. H.*

BEAN DRILL.—If there is a good machine for drilling beans manufactured in your State, I shall be glad to know the address of the maker.—BUCKEYE.

AMERICAN BEE-JOURNAL.—(C. SANDERSON.) This paper is not now published.

GRAPES FROM RAISIN SEEDS.—Mr. CHARLES S. RACEY, of Canada, writes us that he has seen some beautiful large white grapes that were produced from plants raised from the seed of a raisin. He recommends others to experiment with raisin seeds. Take out the seeds, and wash them, and then plant in a warm soil in the spring.

HESSIAN FLY.—J. T. FERGUSON, of Clinton Co., Ohio, writes us that the early sown wheat in his neighborhood is generally destroyed by the fly.

WE are indebted to the Hon. ALFRED ELY for the Patent Office Report for 1860, and for the Smithsonian Reports for 1859 and 1860.

Special Notices.

BOSTON SILVER MEDAL SCREENS.—These *Screens* have become celebrated for assorting and cleaning *Wheat for seed, Barley, Oats, Rye, Buckwheat* and *Beans*. Two Screens, for wheat and oats, 15 by 15 inches, with tray, $2.75. One Screen and tray, 15 by 30 in., for taking oats, cheat, pink, and all foul stuff from wheat, $3.25. Four Screens and tray, 15 by 30 in., for sorting marrow-fat, medium and pea-beans, broken and refuse, 5 kinds at one operation, $7.

Orders by mail or express executed at short notice. Manufactory, 34 North Market Street, Boston, Mass. SANFORD ADAMS, Inventor and Proprietor.

COE'S SUPERPHOSPHATE OF LIME.—The following decisive testimony to the value of Coe's Superphosphate as a superior fertilizing agent, is from Hon. AMASA WALKER, of Massachusetts:

NORTH BROOKFIELD, Nov. 26, 1861.

Messrs. Coe & Co., Boston. Gentlemen:—You may recollect that I had of you last spring a quantity of superphosphate of Lime. I made use of it in several ways—in each case with satisfactory results. First, on corn. I planted one part of a field with the use of fifteen loads of barn manure to the acre, and the other part with your phosphate—a small handful in each hill, probably at the rate of three hundred lbs. to the acre. That which was planted in the latter way was quite as thr fly and vigorous as in the former, and yielded as largely. This much exceeded my expectations. Secondly, I used the phosphate in planting potatoes, and obtained an excellent crop in exhausted pasture land, plowed up for the purpose. Thirdly, I used the article for a dressing for an oat crop—with no other manure, and the land previously in low condition. I got 40 bushels to the acre, by the application of 300 lbs. phosphate.

Fourthly, I applied it upon an old and long exhausted pasture land, at the rate of 600 lbs. to the acre. The effect was wonderful, and where almost nothing of any kind had previously grown, I had a full growth of white clover, which the cows fed down too closely, and which showed itself so green, as compared with its surroundings, that it would be plainly distinguished at a great distance.

I made a similar experiment with your phosphate five years since, on a part of the same pasture, and the good effects of it were as visible last year as ever. A rich sward is formed where there was formerly nothing but grey moss and a little struggling June grass.

From these and other similar experiments made for several years, I am satisfied that our old pastures, many of which have been grazed for the greater part of a century, and have become so exhausted by cropping as to be almost worthless, may be rendered very fertile by the application of superphosphate and other similar fertilizers, and at a cost that will pay. Lean pastures are the greatest drawback upon our agriculture in the older parts of New England. To keep cows through the winter and half starve them all summer, is not a very profitable, though very common operation.

I have this fall sowed my winter wheat with phosphate alone for manure, at the rate of 300 lbs. to the acre; and although the land was the poorest and most exhausted I had on my farm, I have no doubt of a good crop. We are succeeding admirably with wheat in this part of the State, and artificial fertilizers aid us very much. One strong argument in favor of phosphate of lime, and similar manure, is that they can be transported to fields at a considerable distance with little extra cost. I apply my barnyard manure and compost in fields near home, and cultivate all distant lots with portable manure.

My intention now is to use a much larger amount of the Superphosphate of Lime next year than I have done before, especially on corn and grass lands.

I am, very respectfully, your obedient servant,

(Signed) AMASA WALKER.

ADVERTISEMENTS.

A FEW short advertisements of interest to farmers—and only such—will be inserted in the *Genesee Farmer* for twenty-five cents a line, or $2.50 per square, each insertion, payable in advance. To secure insertion, they should be sent in by the 15th of the previous month.

MOLE PLOWS—By J. DUNHAM, Ithaca, N. Y. 3—tf

FOR 50 CENTS—The subscriber will send to any address Receipts for making LIQUORS, WINES, &c., at one-fourth of the present cost. Address CO. NORTON, Box 95, Pittston, Luzerne Co., Pa.

Concord Grape Vines.

I WOULD give notice that I shall not be able to supply Vines for any more Vineyards 'till next fall, when I shall have about 30,000 more vines to sell, 50 per cent. lower than others ask, and on a *year's credit!* I will, however, sell a few the coming spring, one year old vines, grown in the open air, at $8 per dozen. The Concord is going up with a rush, ahead of the Delaware, and every other variety. T. B. MINER.

March.—3t Clinton, N. Y.

SCHENECTADY AGRICULTURAL WORKS,

G. WESTINGHOUSE & CO., Proprietors,

MANUFACTURE Endless Chain or Railway Powers, for One, Two and Three Horses; Four and Eight Horse Lever Powers, Combined Threshers and Cleaners, Threshers and Vibrating Separators, Clover Machines with Huller and Cleaner combined—also, with Thresher, Huller and Cleaner combined; Wood Sawing Machines, both Circular and Drag; Cider Mills and Corn Shellers combined; Dog or Sheep Powers, &c.

☞ For Descriptions and Prices of above named articles, apply for an Illustrated Circular. Address

G. WESTINGHOUSE & CO.,

March.—3t Schenectady, N. Y.

TREES AT LOW PRICES.

For Spring of 1862.

ELLWANGER & BARRY

RESPECTFULLY invite the attention of the public to their present immense stock, covering upward of FIVE HUNDRED ACRE OF LAND, and embracing everything desirable in both

Fruit and Ornamental Departments,

Grown in the very best manner, and offered either at wholesale or retail, at greatly reduced prices.

Parties who contemplate planting should avail themselves of this opportunity, the like of which may not occur soon again.

Descriptive and Wholesale Catalogues forwarded gratis on receipt of a stamp for each, and all information as to prices, &c., promptly given on application.

MOUNT HOPE NURSERIES,
ROCHESTER, N. Y.

Marblehead Cabbage Seed.

STONE MASON CABBAGE.—I have received numerous letters from farmers residing in Canada and all the Northern, Middle and Western States, who purchased seed last season, expressing the highest satisfaction with this Cabbage—its reliability for heading, the large size of the head, the peculiar sweetness and hardness of the head, and first-rate keeping qualities. A large number took the first premiums at the Fairs of their respective counties. A number write that every plant set a handsome head; one that he sold $50 worth from less than a seventeenth of an acre of land. I have copied a number of these letters into my Seed Catalogue.

MARBLEHEAD MAMMOTH DRUMHEAD.—Numbers have written me of their success with this monster variety; that they raised cabbages weighing from 25 to 45 lbs.—the general wonder of the community. They have been raised weighing 62 lbs. I regret that I have but a limited supply of seed this season. I will fill orders as long as it lasts.

Stone Mason Cabbage, per ounce, I prepaying postage, 25 cts.; per lb., $2.67. Marblehead Mammoth, per package of about 1000 seeds, 25 cents. Hubbard Squash, per package, 12 cents.

The seed is of my own raising, and warranted of the purest quality grown.

☞ CATALOGUES forwarded to applicants, of every variety of Garden seeds and many hundred varieties of Flower seeds.

JAMES J. H. GREGORY,

March.—3t Marblehead, Mass.

GENESEE SEED STORE
AND
AGRICULTURAL WAREHOUSE,

17 South St. Paul Street, Rochester, N. Y.

Seeds for Spring of 1862.

I HAVE received, during the last fall and present winter, from English, French and American growers of undoubted veracity, "not" the largest and finest lot of Flower and Vegetable Seeds ever imported into this country (I have also done the same thing for fourteen years), but five times as large, and just as good, and in some cases better than another party who boasts of the largest stock ever imported into this country.

I will send to any party for One Dollar, 20 papers of Choice Flower Seeds. Among them, one each of the finest Asters, Balsamines and Stocks, all to be as good as can be got in this city at double the price.

I will also send for One Dollar, Twenty papers or packages of Flower and Vegetable Seeds, assorted as parties may desire.

CATALOGUES of Garden, Field and Flower Seeds sent to all applicants.

I will send as above, to all who may favor me with an order, by mail, post paid, to any part of the United States, or to the lines, if ordered for Canada. Address, J. RAPALJE.

TOMATO DE LAYE.

And other Seed, Forwarded by Mail, Post-paid.

THE NEW FRENCH TOMATO.—This new variety is called Bush, or Tree Tomato, being very stocky and erect, differing markedly from any other variety. The fruit is large, solid, and of excellent quality. A single stake is all that is needed to support the plant when laden with fruit. Packages containing 50 seeds, 15 cents. New White Tomato, 18 cents. Perfected (Laster's), 12 cents. Early Paris Cauliflower (the best early variety), 25 cents. Early Frame Cucumber (improved by Newbold), 10 cents. New White Spine Cucumber, 10 cents. Squash Pepper (warranted true and fresh), 10 cents. Tom Thumb, or Strawberry Pea (grows but eight inches high and bears well) 12 cents. Darling's Early Sweet Corn (best of the early sweet varieties) 10 cts. Burr's Mammoth Sweet Corn (best of all the large varieties), 10 cents. Stowell's Evergreen Corn (excels all in keeping long in green state), 10 cents. Indian Chief Bean (pod is nearly transparent and *always* fit for stringing), 10 cents. Tenn's Ball Lettuce (early), 6 cents. Imperial Cabbage, 6 cents. Mountain Sweet Watermelon (new and excellent), 10 cents. Christiana Muskmelon (early and superior), 8 cents. Cole's Crystal White Celery, 10 cents. Hubbard Squash (purest grown), 12 cents. Dandelion Seed, 10 cents. Early Scarlet Radish, 6 cents. Extra Pure Marrow Squash, 10 cents. Danver's Early Yellow Onion, 10 cents.

All of the above will be sold by the ounce or pound.

☞ CATALOGUES of every variety of Garden and Flower Seeds, with prices, forwarded gratis.

Part of my seed is of my own growing, the remainder from reliable sources. JAMES J. H. GREGORY,

Marblehead, Mass.

DEWEY'S COLORED FRUITS AND FLOWERS,

FOR the use of Nurserymen and Tree Agents—embracing nearly 400 varieties of Apples, Pears, Plums, Cherries, Peaches, Quinces, Apricots, Nectarines, Grapes, Strawberries, Currants, Raspberries, Flowers, Roses, Evergreens and Shrubbery, CAREFULLY DRAWN FROM NATURE AND COLORED BY EXPERIENCED ARTISTS.

I have in my employ some of the most experienced Lithographers and Horticultural Colorists in the United States. A large number of the more popular Plates are Lithographed—which enables me to produce the most perfect Plates made; for the accuracy and beauty of which, I have received the SILVER MEDALS of the New York State Agricultural Society, also Medals and Diplomas from other State Societies.

☞ CATALOGUES sent on application by mail.

Imitations of my Plates have been made and offered at low prices. To guard against imposition and inferior Plates, I have my name attached to all my Plates.

Nurserymen and Tree Agents, please send for a Catalogue.

Address D. M. DEWEY, Ag't, Rochester, N. Y.

Wanted—Concord Grape Vines.

ANY person having GENUINE Concord Grape Vines for sale in lots of 10 to 1,000, may hear of a cash purchaser by applying to T. B. MINER, Clinton, Oneida Co., N. Y.

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50 VARIETIES OF BURR-STONE FLOUR AND GRAIN MILLS. Prices from $60 to $500. Illustrated Catalogues furnished. EDWARD HARRISON,

New Haven, Conn.

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28 CENTS EACH—MICROSCOPES magnifying 500 times. Five, of different powers, $1. Mailed free.

Mar.—3t* F. H. BOWEN, Box 220, Boston, Mass.

Everybody should have a Copy.

Rural Annual and Horticultural Directory,

FOR 1862.

PRICE ONLY TWENTY-FIVE CENTS!

THE *Rural Annual and Horticultural Directory* is a book of 120 pages, published at the beginning of each year, at the office of the *Genesee Farmer*. It is filled with matter interesting and useful to every one engaged in the culture of the soil, in town, village, country or city.

Among the contents will be found articles on the following subjects:

PLANTING FRUIT TREES;
ANNUALS AND THEIR CULTURE;
EVERLASTING FLOWERS;
MANUFACTURE OF DOMESTIC WINES;
CULTURE OF DWARF AND STANDARD PEARS;
CULTIVATION OF THE CEREALS;
ON CIDER MAKING;
AMOUNT OF ROOTS FROM CLOVER AND GRASSES;
CUTTING POTATOES FOR PLANTING;
CHINESE HOGS;
HENS AND THEIR MANAGEMENT;
CULTURE OF THE PEACH IN THE MIDDLE STATES;
COVERING GRAPE VINES IN WINTER;
TREATMENT OF MILCH COWS;
APPLICATION OF MANURE;
CULTURE OF WHITE BEANS;
THE ENGLISH MUTTON SHEEP,

With a great variety of other matters of general interest.

Price only 25 cents. It will be sent prepaid by return mail to any address. Send the money in postage stamps.

Address JOSEPH HARRIS,
Publisher of the *Genesee Farmer* and *Rural Annual*,
Rochester, N. Y.

☞ The *Rural Annual* has been published seven years. The seven numbers—for the years 1856, '57, '58, '59, '60, '61 and '62—will be sent, prepaid, by return mail, to any address for $1.40.

IMPORTANT TO STOCK GROWERS.

THE FOURTH VOLUME
OF THE
AMERICAN STOCK JOURNAL,

Commenced January 1, 1862.

IT is devoted exclusively to matter relating to the breeding, care and management of our domestic animals, and is the largest, cheapest, and most widely circulated periodical of the kind in this country. Thirty-two large octavo pages, handsomely illustrated. Every stockman should have it.

Published monthly at 25 Park Row, New York, at $1.00 per year. Specimen copies sent gratis on application to A. G. HATCH, General Agent, Windsor, Vt.

D. D. LINSLEY, Editor and Proprietor.
OTIS F. R. WAITE, Associate Editor.

The Cheapest and Best
LITERARY MAGAZINE IN THE WORLD
IS THE
FIVE CENT MONTHLY.

EACH number contains 32 bound pages of choice Original Romances, Tales, Sketches, Poems and Criticism. ONLY 5 **cents** a number. Subscription price, **50 cents a year.** by mail to any address. Specimen copies sent upon the receipt of two red stamps. Address E. H. BULLARD & CO., Publishers, 37 Cornhill, Boston, Mass. March.—2t

"Short-Horns."

I HAVE for sale a few BULLS and BULL CALVES, COWS, and HEIFERS, mostly by the Imported Bulls Duke of Gloster (11,382) and Grand Duke of Oxford (16,184).

Ja.—4t JAMES O. SHELDON, Geneva, N. Y.

FOWLER'S PATENT STEAM PLOWING MACHINERY.

PATENT-RIGHTS for States and Counties and Machines are now for sale. Descriptive pamphlets sent post free. Apply to R. W. EDDISON,

Jan.—4t 608 South Delaware Avenue, Philadelphia.

Books for Farmers and Fruit Growers.

THE following works on Agriculture, Horticulture, &c., may be obtained at the Office of the GENESEE FARMER:

American Florist's Guide	75	Quimby's Mysteries of Bee-keeping Explained	1 00
Bright on Grape Culture	50	Rabbit Fancier	25 & 50
Browne's Bird Fancier	25 & 50	Richardson on the Hog	25
Cole's Am. Fruit Book	50	Do. Domestic Fowls	25
Dana's Muck Manual	1 00	Do. Pests of the Farm	25
Do. Prize Essay on Manures	25	Do. on the Dog	25
Everybody's Lawyer	$1 & 1 25	Rural Annual and Hort. Directory for 1861	25
Every Lady her own Flower Gardener	50	(First five vols. do., 1856-7-8-9 and 60, sent for	1 00
Farm Drainage, (H. F. French)	1 00	Rodgers' Scientific Agriculture	75
Genesee Farmer (bound volumes) each	1 00	Rural Poetry of the English Language, (a beautiful book for a present)	3 00
Liebig's Animal Chemistry	25	Smith's Landscape Gard'g	1 25
Liebig on Food, &c	25	Skillful Housewife	25
Do. Relations of Chemistry to Agriculture	25	The Rose Culturist	25 & 50
Miner's Bee-keeper's Manual	1 00	The Horse and his Diseases	1 00
Modern Cookery, by Miss Acton and Mrs. S. J. Hale	1 00	Wilson on Flax	25
Nash's Practical Horse Farrier	50	Younatt on the Horse	1 25
		Do. on Sheep	75
		Do. on the Hog	75

☞ Any of the above named works will be forwarded by mail post-paid, on receipt of the price specified.

Address **JOSEPH HARRIS,** Rochester, N. Y.

Rochester Lake Avenue Nurseries.

THE Proprietors have on hand a general assortment of
Fruit and Ornamental Trees, Grape Vines,
Including all the new varieties that are desirable; SHRUBS, ROSES, and HERBACEOUS PLANTS. Among the latter,
DONNELLAN'S NEW SEEDLING PÆONIES.
Also, GREENHOUSE and BEDDING-OUT PLANTS, BULBS, &c., &c.

☞ *Send for CATALOGUES.* Address
J. DONNELLAN & CO., Rochester, N. Y.

SEEDS! GARDEN SEEDS!

FROM HALLOCK'S SEED AND AGRICULTURAL WAREHOUSE.—The subscriber will forward by mail, postage paid to any address in the United States, a package of twenty sixpenny papers, well filled with good and reliable vegetable seeds, of good varieties to supply the garden, on receipt of $1 by mail. A part Flower seeds will be substituted if desired. Send on your orders. If you wish any particular varieties, name them and they will be substituted if they are to be had in this market. Address

March—2t* E. D. HALLOCK, AGT., Rochester, N. Y.

WOOD CUTS FOR SALE.

WE will sell Stereotypes of the Wood Cuts used in the *Genesee Farmer* and *Rural Annual and Horticultural Directory*. A book containing impressions of over Seven Hundred of these cuts will be sent to those wishing to purchase on the receipt of 50 cents. The book contains an index, showing where descriptions of the cuts will be found.

Address **JOSEPH HARRIS,** ROCHESTER, N. Y.

Grape Vines—Clubbing.

OPORTO VINES, $1 EACH; $6 PER DOZEN.

FOR FIVE DOLLARS I will box and deliver to the Express or Railroad the following vines, one half of them 2 years old:

3 Oporto, 1 Rebecca. 2 Concord, 1 Delaware,
2 Hartford Prolific, 2 Clinton, 2 Isabella.

For vines or catalogues of Lyons Nursery, or terms to Agents, address Ja.—3t E. WARE SYLVESTER, Lyons, N. Y.

FOR SALE—By the subscriber, a MORGAN BLACK HAWK STALLION, sired by Black Hawk, Jr., is five years old, and stands fifteen and a half hands high. Is a beautiful mahogany bay, with black legs, mane and tail. Weighs about 1100 lbs. when in good condition. Is compactly built, possessing remarkable intelligence and muscular powers, having a strong, vigorous constitution. Has an easy, open gait, and bids fair to make a fast traveler. JACOB HOUSTATER,

March.—3t* Pekin, Niagara Co., N. Y.

$100 PER MONTH—Made by any one with Stencil Tools. For a circular explaining the business,

Address JOHN MILLIKEN,
May—1y. Lawrence, Mass.

TO WOOL GROWERS.—I completely cured 100 Sheep of the FOOT-ROT last year, at the small expense of *seven cents*. The recipe for doing which, I will send to any address for 50 cents. D. HALL, Medina, N. Y.

For Spring of 1862.

FINE IMPORTED FLOWER SEEDS,

For Sale by JAMES VICK, Rochester, N. Y.

I HAVE received during the present winter, from the most reliable growers of England, France, and Germany, the largest and finest lot of FLOWER AND VEGETABLE SEEDS ever imported into this country, embracing all that is old and valuable, as well as everything new and rare, regardless of cost. These seeds are put up in neat packages, sold at a moderate price, and afford the lovers of flowers in this country a rare opportunity to obtain the floral treasures of Europe, as well as the choicest of its vegetable productions. A few of the leading varieties are named below, and a full catalogue will be mailed to all applicants.

FLOWERS THAT BLOOM THE FIRST SEASON.

ASTERS.—Double Dwarf Pyramidal Boquet Flowered; Truffaut's Peony Flowered Perfection, in twelve colors, all mixed, or in separate papers; Imbrique Pompone, or Daisy Aster; New Crown, or Two Colored, one of the most delicate, yet showy; New Chrysanthemum Flowered.

STOCKS—*Ten Week.*—New Largest Flowered Dwarf, twelve colors mixed, or each color separate; Large Flowering Dwarf Pyramidal; Wall-Flower-Leaved; Branching German; Autumnal Flowering; Emperor.

BALSAMS.—Double Camelia Flowered, mixed colors; Dwarf Camelia Flowered Spotted; Rose Flowered, mixed colors, &c.

PHLOX DRUMMONDII.—Best Scarlet, Leopoldi, Blue with white Eye, Radowitzii, &c., all of the finest varieties and most showy colors, mixed in one package or separate, as desired.

LARKSPUR.—Double Dwarf Rocket; Hyacinth Flowered, and Stock Flowered.

PORTULACCA.—White Striped with Rose; Yellow Striped; White, Red, Yellow, &c., &c., best mixed, &c.

ANTIRRHINUM.—Brilliant, Firefly, Papilionaceum, Dwarf Striped, &c., mixed or separate.

PANSIES—of first quality, both English and German.

CONVOLVULUS MINOR.—Double New, Splendens, New Dark, Striped, &c.

CONVOLVULUS MAJOR—MORNING GLORY—In every variety of color, separate or mixed.

ALSO:

Calliopsis; Chinese Pinks; Dolichos Lablab; Nasturtium, in a dozen varieties; Gilia; Petunia; Leptosiphon; Escholtzia; Salpiglossis, tall and dwarf; Sensitive Plant; Ice Plant; Cockscomb; Nemophilia; Marigolds; Zinnia Elegans; Sweet Peas, a dozen colors; Marvel of Peru; Sweet Scabious, and almost every Annual worthy of cultivation.

EVERLASTING FLOWERS.

I have every known variety of this interesting and beautiful class of flowers, now so popular for winter bouquets, worthy of cultivation.

HELICHRISUM.—One of the largest and most showy, in four varieties, each of many colors. MONSTROSUM—Large and fine mixed colors; Rosea pleno; Red; Double Dwarf, &c.

ACROCLINIUM—Roseum and Album, (pink and white,) most delicate and beautiful.

GLOBE AMARANTH—Red, Flesh Colored, Striped, White, and Yellow, in separate papers.

XERANTHEMUM—Alba pl.; Cerula pl.; Compacta, and Purple.

RHODANTHE MANGLESII, Polyacolymna Stuarti, etc.

ORNAMENTAL GRASSES.

These, with the Everlasting Flowers, form the best of Winter Bouquets, Baskets, and other Winter Floral Ornaments. I have twenty varieties. The following are some of the most desirable: Anthoxanthum Gracile, Briza, Minima, Medium and Maxima; Lamarkia aurea; Chloris Radiata; Elymus Hystrix; Lagurus Ovatus; Pennisetum Longistilum; Briza Geniculata.

FLOWERS THAT BLOOM SECOND YEAR.

HOLLYHOCK—Fine seed from best Double varieties, of Dwarf habit.

PICOTEES and CARNATIONS—From the best Continental growers.

SWEET WILLIAM—Extra fine.

AQUILEGIA—Finest Double varieties.

Aconitum; Canterbury Bells; Delphinum, several beautiful varieties; Digitalis; Everlasting Pea; Oriental Poppy; Lobelia; Pensiemon, and many other Herbaceous and Perennial Plants

VEGETABLES.

CABBAGE—Early Winningstadt, Blood-Red Late, Large White Erfurt, Large-Headed Savoy.

KOHL RABI—Large Early Purple and Large White.

CELERY—Several best varieties.

CUCUMBERS—Half a dozen best sorts.

LETTUCE—Malta Drumhead, Early Egg, Large Pale Green Asiatic, Large Princess, and Paris White Cos.

ONIONS—Strasburgh, Blood Red, Sulphur Yellow, Silver Skinned, Spanish, and Large Madeira.

CARROTS—Long Red Surrey, Large White Green Top, and Early French Short Horn, for table.

RADISHES—Five Sorts.

TOMATOES—Lester's Perfected, Large Early Red, Yellow Egg-Shaped, and Red Egg-Shaped.

SQUASH—All desirable Summer varieties, and the Hubbard for Winter, pure.

ALSO—A good variety of Parsnips, Beets, Turnips, Salsify, Spinach, Savoy, Pepper, and other Vegetable Seeds.

For the convenience of those who order Seeds, I will send any of the above, by mail, postage paid, at ten cents per package. When the order amounts to $1, two packages extra may be ordered. For $2, six packages extra, and for $5, twenty extra packages,—all which will be sent free of postage. To those who leave the selection to me I will send fifteen papers for $1, with a fair proportion of the newer and more expensive varieties.

NEW AND RARE SEEDS.

DIANTHUS HEDDEWIGII—Seeds per package, 15 cents.

DIANTHUS LACINIATUS—15 cents.

DIANTHUS HEDDEWIGII—Double, 25 cents.

All the European novelties, a list of which will be forwarded to all who desire.

ASTERS.—NEW GIANT EMPEROR, the largest and best, five inches across, 25 cents; NEW ROSE, or LA SUPERB, a magnificent new variety, bright rose, four inches in diameter, 20 cents.

DOUBLE ZINNIA—More double than the Dahlia, and as beautiful. French Seeds 25 cents per package. Seeds of my own growing, from best flowers, 15 cents. Seeds taken from Double and Semi-Double flowers, 10 cents.

FRENCH TREE TOMATO—Growing about two feet in height, with strong stem and branches, requiring no other support than a short, strong stake, to help the main branch hold up its enormous weight of fruit—25 cents a paper.

CAULIFLOWER.—EARLY PARIS, early and fine, per oz. $1, per package, 20 cents; LE NORMAND, extra large, per oz. $1, package, 20 cents; ERFURT LARGE EARLY WHITE, per oz. $1.25, per package, 25 cents; LARGE ASIATIC, a fine large variety, and one of the best large sorts, 25 cents; STADHOLDER, a new large German variety, with very large head and fine flavor, 25 cents; WALCHEREN, a splendid variety, and by many considered the best, 25 cents.

CHOICE ENGLISH GARDEN PEAS.

I offer to the lovers of this delicious vegetable some twenty varieties of the newest and choicest *English Garden Peas*, embracing the earliest, medium, and late, which will give a succession during the season. These will be found very far superior, and in fact bearing no comparison, to the varieties commonly grown.

EARLIEST.—DANIEL O'ROURKE, growing from 2½ to 8 feet; EARLY EMPEROR, 2½ feet; DICKSON'S EARLY FAVORITE, fine and good bearer, 5 ft.; EARLY WASHINGTON, fine, early, 4 ft.; SEBASTOPOL, large podded, productive, 4 ft.

MEDIUM.—HARRISON'S GLORY, fine bearer and excellent, 2½ to 3 ft.; HARRISON'S PERFECTION, very productive and good, 2½ to 3 ft.; NAPOLEON, excellent cropper and fine, 2½ ft.; LORD RAGLAN, splendid quality and very prolific, 3 ft; EUGENIA, new, fine, and great producer, 2½ ft.; VEITCH'S PERFECTION, at least one of the best in cultivation for quality and production, 3 ft; CLIMAX, prolific, good, 3 ft.; RISING SUN, best early green marrow, 4 ft.; NEW PURPLE BLOSSOMED SUGAR, fine, sweet, eatable pods, 6 ft.

LATE—NE PLUS ULTRA, dark green, fine, good bearer, 6 to 7 ft.; TALL GREEM MAMMOTH, very fine, 6 to 7 ft.; COMPETITOR, very large, green, tall and excellent.

I will send any of the above choice Peas by mail, in strong cloth bags, each containing eight ounces, *postage paid*, for 25 cents each. A quart will weigh about 20 ozs.

FOR SEWING MACHINES.

JONAS BROOK & BROTHERS'

PRIZE MEDAL SPOOL COTTON,

200 or 500 yard spools, White, Black, and Colored.

FOR MACHINES, use BROOK'S PATENT GLACE for upper thread, and BROOK'S SIX CORD RED TICKET for under thread. Sold by all first class dealers in city and country; also in cases of 100 dozen each, assorted numbers, by WM. HENRY SMITH, Sole Agent, 36 Vesey street, New York. Ja —1y

The New Lettuce.

TRUE BOSTON CURLED LETTUCE.—I introduce this new variety as surpassing all varieties of the Lettuce family in excellence and elegance. I would invite attention to the rare beauty of its structure and unequalled symmetry of its growth. It is perfectly hardy. Packages containing seed sufficient to supply a family for a season, with directions for cultivation, post paid, 20 cents each; six packages, $1. Every variety of garden seed for sale. Catalogues gratis, JAMES J. H. GREGORY,

Feb.—2t Marblehead, Mass.

PREMIUMS!

PREMIUMS! PREMIUMS!

To Every Reader of the Genesee Farmer.

ALL PRIZES AND NO BLANKS!

How to Do Good and Get Pay for it.

GREAT PAY FOR LITTLE WORK!

BEING desirous of doubling the circulation of the *Genesee Farmer* the present year, we have concluded to offer the following Premiums to those who send us subscribers:

Book Premiums.

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2. To every person who sends us *two* subscribers and one dollar, we will send the *Rural Annual and Horticultural Directory* for 1860 *and* 1861, prepaid by return mail.

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